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**CHARACTERIZATION OF DIOXINS, FURANS AND PCBs
IN RANDOM SOIL SAMPLES COLLECTED FROM
THE ROCKY MOUNTAIN ARSENAL**

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APPROVALS

This report has been prepared for and by the U.S. Environmental Protection Agency, Region 8. The results and conclusions presented in this report are accepted by EPA Region 8 as correct and appropriate.

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1.0 INTRODUCTION

Dioxins are a class of chemicals that are of potential human health concern because they may pose an increased risk of cancer and other adverse health effects at very low exposure levels. As a consequence, regulatory agencies often perform a thorough evaluation of potential risks from dioxins at sites of regulatory concern, especially sites involved in the manufacture of certain chlorinated pesticides and other chemicals. One site of this type is the Rocky Mountain Arsenal (RMA), located near Denver, Colorado.

However, the occurrence of dioxins in site soils is not always evidence of a site-specific release, since dioxins can be formed and released to the environment from multiple sources. Historically, the largest source has been atmospheric deposition resulting from incineration of medical and municipal organic wastes which have high contents of chlorine (EPA 1994a). In addition, dioxins can be formed in low levels from the combustion of many other types of organic precursors such as coal and wood, so dioxins can also be released from power plants, wood burning furnaces, forest fires, etc. (EPA 1998b).

Because of these multiple potential sources of dioxin release to the environment, it is often difficult to know whether dioxin levels observed in soil at a particular location are attributable to some specific local "point" source (e.g., pesticide or chemical manufacturing), or whether the levels represent typical "ambient" or ubiquitous concentrations due to other non-point sources. In order to make this judgement, accurate and reliable data are needed on dioxin levels in typical area soils. However, as discussed in USEPA (1999), available data on ambient levels of dioxins in soil are very limited and are of uncertain quality and relevance. Consequently, the USEPA Region VIII, working in cooperation with State and local governmental agencies, recently completed a study to characterize the typical ranges of dioxin levels in ambient soils in the Denver front range area (USEPA 2000c). These data provide an adequate basis for comparing dioxin levels at specific sites with those observed in the general area, in order to judge whether the site is contaminated with dioxins attributable to some site-specific source and release pathway.

This purpose of this study is to summarize data on the levels of dioxin in random soil samples collected from across the RMA, and to compare the site data with the regional ambient data in order to judge whether levels at the RMA are elevated compared to other comparable locations in and about the greater Denver area, and, if so, whether the levels are in a range of potential human health concern to on-site workers.

Other reports which are part of this project and which provide additional information on the absolute and relative level of dioxins in on-site and off-site soils include:

Evaluation of Potential Human Health Risk from Dioxins, Furans and PCBs in Soil at the Western Tier Parcel of the Rocky Mountain Arsenal (USEPA 2000a)

Characterization of Dioxins, Furans and PCBs in Soil Samples Collected From Historic Use Areas of the Rocky Mountain Arsenal (USEPA 2000b)

Characterization of Dioxins, Furans and PCBs In Soil Samples Collected from the Denver Front Range Area (USEPA 2000c)

2.0 METHODS

A detailed description of the rationale, methods, and Standard Operating Procedures (SOPs) used in this study are provided in the Project Plan for the study (USEPA 1999c). A summary of key elements of the study design and of the methods employed is presented below.

2.1 Calculation of TEQ

2,3,7,8-Tetrachlorodibenzodioxin (TCDD) is the most potent of a group of related chemicals that include other congeners of dioxins, furans, and polychlorinated biphenyls (PCBs). For the purposes of this report, the term “dioxins” is meant to refer to the set 17 dioxins and furans and the set of 12 PCBs that bind to the aryl hydrocarbon (Ah) receptor and possess toxic characteristics similar to those of TCDD. These so-called “Ah-agonists” are listed in **Table 1**.

Not all dioxin congeners are equally toxic. The relative toxicity of a congener, compared to that of TCDD is expressed in terms of the Toxicity Equivalency Factor (TEF). **Table 1** lists consensus TEF values for mammals (including humans), birds, and fish. These TEF values were developed by a panel of experts assembled by the World Health Organization (Van den Berg et al. 1998). Note that TEFs are often based on limited data, and so they are only approximations of the relative toxicity of each congener, rounded to the nearest half order of magnitude.

The aggregate toxicity of a mixture of different dioxins in an exposure medium (soil, food web items, etc.) is a complex function of a) concentrations of each congener in media, b) daily intake of the medium, c) absorption of each congener from that medium, and d) congener-specific TEF values. However, for purposes of screening-level evaluations of dioxin concentrations in soil samples, it is usually most convenient to calculate the concentration of TCDD-Equivalents (TEQ) present in the soil, as follows:

$$TEQ = \sum_{i=1}^{i=29} (C_i @ TEF_i)$$

This approach allows a comparison of different soils in terms of a single value (the TEQ for the sample) rather than having to compare up to 29 different values. For the purposes of this report, the TEQ values are based on the TEFs for mammals (humans).

2.2 Soil Sampling

Sampling Locations

The RMA is an area of approximately 27 square miles. As shown in **Figure 1**, this area is divided into 28 Sections. One grab sample was collected from each section at a randomly selected location. These sampling locations are indicated by red “x’s” in Figure 1.

Sampling Depth

Because dioxins nearly always bind tightly to soil, it is expected that any dioxin contamination in soil that has occurred chiefly as result of atmospheric deposition and/or application of herbicides will be restricted to the surface. Thus, surface soil is the exposure medium of chief concern for both human and ecological receptors. Therefore, all soil samples collected for this study were grab samples collected at 0-2 inches in depth.

Sample Collection and Storage

Samples were collected using a stainless steel trowel. A ruler was used to ensure that the actual depth to which soil was collected was within ½ inch of the target (i.e., a bottom depth of no less than 1.5 inches and no greater than 2.5 inches). The soil was placed directly into a clean 16-oz amber glass jar with a teflon-lined lid, and these bottles were stored at room temperature in the dark.

2.3 Sample Preparation

All samples collected in the field were submitted under chain-of-custody to Columbia Analytical Services (CAS) for sample preparation. Each sample was air dried to constant weight, followed by coarse-sieving through a #10 (2 mm) stainless steel screen. The fraction passing the screen is referred to as the “bulk” fraction. Approximately 100 g of the bulk sample was placed in a clean amber glass jar and stored for future used. The remainder of the bulk sample was further sieved through a 60-mesh (250 um) sieve in order to isolate soil particles less than 250 um in diameter. This fraction (referred to as the “fine” fraction) was isolated because it is believed that fine soil particles are more likely to be ingested by hand to mouth contact than coarse particles, and hence it is concluded that this soil fraction is the most relevant for evaluating human health risk. All of the fine material passing the 250 um sieve was placed in a clean amber glass bottle for analysis and storage.

2.4 Sample Analysis

Following sample preparation as described above, samples were submitted under chain of custody to Midwest Research Institute (MRI) for chemical analysis. Analysis of dioxins in soil samples requires a sophisticated extraction and clean-up procedure. This procedure is detailed in USEPA (1999c) Standard

Operating Procedure 11. In brief, the congeners are determined using isotope dilution method via high resolution gas chromatography/mass spectrometry (HRGC/HRMS). Samples are fortified with ¹³C-labeled PCDD/PCDF/PCB isomers and extracted with an organic solvent. Before cleanup of the extract, the analytes are exchanged into hexane and fortified with ³⁷Cl-labeled 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. Finally, the extract is sequentially partitioned against concentrated acid and base solutions.

The Method Detection Limit (MDL) for dioxins/furans by this analytical method is defined as a signal that is 2.5 times the average signal noise. An estimate of the average signal noise is available for each analyte in each samples, so the MDL varies from sample to sample and from analyte to analyte. The Method Quantitation Limit (MQL) is based on the lowest calibration standard used and is defined as a signal that is 10-times the average signal noise. Because the noise level varies from sample to sample and analyte to analyte, DLs and QLs also vary from sample to sample and from congener to congener. All congeners that yielded signals that were below the sample-specific detection limit for that congener (signal/noise ratio < 2.5) were evaluated by assuming a concentration value equal to ½ the detection limit for that congener.

2.5 Quality Assurance

A number of steps were taken to obtain data that would allow an assessment of the accuracy and reliability of the data collected. Key elements of the Quality Assurance program are summarized below.

Performance Evaluation Samples

Performance Evaluation (PE) samples are samples of soil that contain known quantities of analyte and that are submitted blind to the analytical laboratory. In this study, three different PE samples were used. These were obtained from EPA's Quality Assurance Technical Support (QATS) laboratory. Nominal values (ppt as TEQ in bulk soil, based on PCDD/PCDF congeners only) are listed below:

Description	Nominal Value (ppt TEQ in bulk soil)
Native western soil	< 2
Low standard	35
Medium standard	59

One aliquot of each of these three QATS PE samples was submitted to the laboratory along with each set of 14 field samples. In some cases the sample was submitted un-sieved (bulk), and in other cases the samples were sieved, and only the fine fraction was analyzed.

Field Splits and Duplicates

A field duplicate is a second sample of soil collected at the same location as the first sample was collected, by alternating scoops of soil that was placed into the sample jar and into the duplicate jar. A sample split is a specimen that is generated by dividing a single field sample into two parts; in this case, a second aliquot from four total aliquots of sieved soil was submitted from the EPA archiving laboratory in Golden, CO, to the analytical laboratory. Both field duplicate and laboratory split samples were given unique and random identifying labels, so as to be blind to the laboratory analysts. Analysis of these types of samples provided data on the variability within and between related samples. One sample of each type was submitted to the laboratory with each set of about 14 field samples.

Laboratory Quality Control Samples

Laboratory QA samples are samples prepared and run by the laboratory in a non-blind fashion to monitor the performance of the analytical method. Laboratory QA samples included **Method Blanks** (analyte-free soil), **Laboratory Control Samples** (similar to PE samples, but the identity and true concentration are known to the laboratory), and **Method Duplicates** (investigative samples that are split prior to sample preparation at the analytical laboratory).

Data Validation/Verification

All data from MRI were subjected to a data verification check that was performed by RMA contractors (see SOP 12 in the Project Plan). No significant problems were detected in this verification check.

Following verification, all data values were reviewed by EPA to assign data usability flags. **Table 2** summarizes the data quality flags codes that were used, along with a description of the effect of the flag on the data usability assessment. In accord with USEPA (1992) data usability guidelines (Data Usability for Risk Assessment in Superfund), these flags are used for producing two data sets:

- 1) a semi-quantitative set of results with a value (actual or proxy as per above flags) for each congener; this result is referred to in this report as the “**Full**” TEQ value
- 2) a quantitative data set with more certain quantitative values (actual or proxy as per above flags) for only the congeners that have no disqualifying flags (D, JN, R and LT); this result is referred to in this report as the “**Quantitative**” TEQ value.

This distinction is made to help evaluate the effects of estimated values on TEQs and to evaluate profiles.

3.0 RESULTS

Detailed analytical results for each field sample are presented in **Appendix A1**, and detailed results for each QA sample run as part of this study are presented in **Appendix A2**. Graphical representations are presented in **Appendix B**. The results are summarized below.

3.1 TEQ Values

Table 3 presents the results (expressed as ppt of TEQ) for each of the 28 grab samples collected during the study. The spatial pattern for full TEQ values based on dioxins and furans only (excluding PCBs) are shown in **Figure 2**.

As seen, most samples (25 out of 28) had full TEQ values that were less than 3 ppt. TEQ values were slightly elevated (compared to the rest of the samples) in Section 1 (26 ppt), Section 2 (8 ppt), and Section 35 (5 ppt), all of which are located in the South Plants area of the RMA. As discussed in USEPA (2000b), other samples collected in this area support the conclusion that dioxin levels are slightly elevated compared to the rest of the RMA in the South Plants area, but that contaminant levels tend to fall off rapidly as a function of distance from this historic source area.

Comparison of the values for Full and Quantitative in Table 3 reveal that in most cases the two values are similar, especially for the samples with elevated levels, with an average difference of about 0.3 ppt. This indicates that congeners at or below the quantitation limit do not contribute strongly to the estimated total value.

3.2 Contribution of PCBs

As noted above, the TEQ values presented in the right-hand section of Table 3 are based on the sum of TEQ values across 17 dioxin/furan congeners and 12 dioxin-like PCBs. Comparison of the values for PCBs alone (center section of Table 3) to the values in the right hand section (summed across all congeners) reveals that PCBs contribute an average of about 30-35% to TEQ values, with the majority (65-70%) being attributable to PCDDs and PCDFs.

3.3 Contribution of Specific Congeners

The congener composition of a soil sample may provide useful information about the source of the material, and helps to reveal which specific congeners are contributing the majority of the TEQ levels.

The mean contribution of each congener to TEQ is summarized in **Table 4**. As seen, most of the TEQ (full and/or quantitative) is contributed by pentachloro- and hexachloro-dioxins and furans, with an additional contribution from 1,2,3,4,6,7,8-HpCDD and from PCB-126. TCDD itself contributes an average of less than 2% of the total.

3.4 Quality Assurance Samples

Quality assurance samples analyzed as part of this study indicate that the data are reliable and accurate.

Method Blanks

Two method blanks were included with the samples for this study. The values for full TEQ were both 0.2 ppt. This indicates that there is no significant source in dioxin or PCB contamination within the laboratory.

Splits and Duplicates

TEQ values for duplicate and split pairs are as follows:

Sample	Full	Quantitative
S-1	25.4	24.6
S-1 Split	7.0	6.8
S-5	1.8	1.5
S-5 Split	1.1	0.2
S-23	0.3	0.2
S-23 Dup	0.4	0.3
S-35	3.6	3.2
S-35 Split	3.1	2.7

As seen, except for the first pair (S-1), there is good agreement between splits and duplicate pairs, with an average difference of less than 2 ppt. The basis for the discrepancy between the original and split result for sample S-1 is not known, but is considered to be atypical and is currently being investigated.

Blind Performance Evaluation Samples

Analytical results for the soil standards (PE samples) obtained from QATS are summarized below.

Sample	Full TEQ (ppt) (PCDD/PCDF Only)			
	Bulk		Sieved	
	Nominal	Measured	Nominal	Measured
Clean Soil	< 2	NM	--	1.9 ± 1.2 (N=2)
Low Standard	35	NM	--	69 ± 2 (N=2)
Medium Standard	59	NM	--	121 ± 8 (N=2)

NM = Not measured

As seen, measured values for PE samples that were sieved before analysis are about twice as high as the nominal values for the bulk PE samples. This indicates that dioxins and furans tend to be more concentrated (on a mass per unit mass basis) in fine particles than in bulk soil, as would be expected for a material that adheres to the surface of particles, since the surface area to mass ratio increases as particle size decreases.

Laboratory Spikes

Analytical recovery of congeners from 2 different laboratory spikes (nominal full TEQ = 252 ppt) were 91% and 95%, respectively.

4.0 DISCUSSION

Comparison to Human-Health Based Guidelines

One of the reasons for performing this study was to determine whether dioxin levels in on-site soils might be of health concern to on-site workers. The concentration in soil that is identified by USEPA as the potential level of concern for workers is 5,000-20,000 ppt (EBASCO 1994). Inspection of Table 3 reveals that all of the samples collected in this study, including the samples from the South Plants area of the site (the region with the greatest impact from historic releases), the full TEQ for TCDDs and TCDFs are all far below the level of potential health concern to workers:

Health Criterion:	5000 ppt
Maximum RMA Grab sample	25 ppt
Mean RMA Grab sample	2 ppt

It should also be noted that the areas of RMA with the highest dioxin levels are currently undergoing soil remediation due to the presence of organo-chlorine pesticide (OCP) contamination. Once this remediation is complete, it is expected that dioxin levels on the RMA will be approximately the same as for any other open space area in the Denver front range area.

Comparison to Denver Front Range Area Background Levels

Figure 3 compares the distribution of concentration values observed at the random sampling locations within RMA with values observed at sampling locations around the greater Denver front range area (USEPA 2000c). As seen, the concentration values at RMA are similar to levels observed in open space and agricultural areas, and are lower than values observed in commercial, industrial and residential areas. Multiple pair-wise comparisons using the Mann-Whitney rank sum test indicate that there is no statistical difference between the on-post random samples and the Denver front range data sets for open space ($p = 0.966$) or agricultural lands ($p = 0.834$), while the on-post random samples are different (lower) than the off-post commercial, industrial and residential data sets ($p < 0.05$).

5.0 SUMMARY AND CONCLUSIONS

The concentration of dioxins is low in most samples of soil collected from the RMA, although small elevations are observable in some samples collected from areas close to the former chemical manufacturing operations (the South Plants area). The distribution of values across the site is not statistically different from values observed in open space and agricultural areas around the Denver front range area, and all of the on-site values are far below a level of health concern to on-site workers.

6.0 REFERENCES

- EBASCO. 1994. Final Integrated Endangerment Assessment/ Risk Characterization (IEA/RC). Version 4.2. July 1994.
- Gannett Fleming. 1999. Review of Former Sampling Programs at Rocky Mountain Arsenal, Colorado. Memo from Karen Prochnow, Gannett Fleming, Inc., to Laura Williams, USEPA. March 19, 1999.
- USEPA. 1991. Risk Assessment Guidance for Superfund. Volume I. Human Health Evaluation Manual (Part A). EPA/540/1-89/002.
- USEPA. 1994a. Health Assessment Document for 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (TCDD) and Related Compounds. Volume III of III. Office of Health and Environmental Assessment Office of Research and Development. External Review Draft. August 1994. EPA/600/BP-92/001c.
- USEPA. 1994b. Guidance for the Data Quality Objectives Process. USEPA Office of Research and Development. EPA QA/G-4. EPA/600/R-96/055.
- USEPA. 1998a. Approach for Addressing Dioxins in Soil at CERCLA and RCRA Sites. OSWER Directive 9200.4-26. Memo from Timothy Fields Jr. April 13, 1998.
- USEPA. 1998b. The Inventory of Sources of Dioxin in the United States. Review Draft. USEPA Office of Research and Development. EPA/600/P-98/002Aa. April 1998.
- USEPA. 1998c. Guidance for Data Quality Assessment. USEPA Office of Research and Development, EPA QA/G-9. EPA/600/R-96/084.
- USEPA. 1999a. Requirements for Quality Assurance Project Plans for Environmental Data Operations. Draft Interim Final. USEPA Quality Assurance Management Staff. QA/R-5.
- USEPA. 1999b. Project Plan for Confirmation Soil Sampling at the Western Tier Parcel, Rocky Mountain Arsenal, Commerce City, Co. Prepared for USEPA Region VIII by ISSI Consulting Group, Inc. July, 1999.
- USEPA. 2000a. Evaluation of Potential Human Health Risk from Dioxins, Furans and PCBs in Soil at the Western Tier Parcel of the Rocky Mountain Arsenal. Report prepared for USEPA Region VIII with assistance from Gannett Fleming, Inc. October, 2000.

USEPA. 2000b. Characterization of Dioxins, Furans and PCBs in Soil Samples Collected From Historic Use Areas of the Rocky Mountain Arsenal. Report prepared for USEPA Region VIII with assistance from Gannett Fleming, Inc. October, 2000.

USEPA. 2000c. Characterization of Dioxins, Furans and PCBs In Soil Samples Collected from the Denver Front Range Area. Report prepared for USEPA Region VIII with assistance from Gannett Fleming, Inc. October, 2000.

Van den Berg M, Birnbaum L, Bosveld ATC, Brunström B, Cook P, Feeley M, Giesy JP, Hanberg A, Hasegawa R, Kennedy SW, Kubiak T, Larsen JC, van Leeuwen FXR, Liem AKD, Nolt C, Peterson RE, Poellinger L, Safe S, Schrenk D, Tillitt D, Tysklind M, Younes M, Wærn F, Zacharewski T. 1998. Toxic Equivalency Factors (TEFs) for PCBs, PCDDs, PCDFs for Humans and Wildlife. Environmental Health Perspectives 106:775-792.

Table 1. List of Analytes and TEFs

Class	Target Analyte	TEF		
		Mammals	Birds	Fish
Dibeno-p-dioxins (PCDDs)	2,3,7,8-TCDD	1	1	1
	1,2,3,7,8-PeCDD	1	1	1
	1,2,3,4,7,8-HxCDD	0.1	0.05	0.5
	1,2,3,6,7,8-HxCDD	0.1	0.01	0.01
	1,2,3,7,8,9-HxCDD	0.1	0.1	0.01
	1,2,3,4,6,7,8-HpCDD	0.01	< 0.001	0.001
	OCDD	0.0001	0.0001	<0.0001
Dibenzofurans (PCDFs)	2,3,7,8-TCDF	0.1	1	0.05
	1,2,3,7,8-PeCDF	0.05	0.1	0.05
	2,3,4,7,8-PeCDF	0.5	1	0.5
	1,2,3,4,7,8-HxCDF	0.1	0.1	0.1
	1,2,3,6,7,8-HxCDF	0.1	0.1	0.1
	1,2,3,7,8,9-HxCDF	0.1	0.1	0.1
	2,3,4,6,7,8-HxCDF	0.1	0.1	0.1
	1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01
	1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01
	OCDF	0.0001	0.0001	<0.0001
PCBs	3,3',4,4'-TCB (77)	0.0001	0.1	0.0005
	3,4,4',5-TCB (81)	0.0001	0.05	0.0001
	3,3',4,4'-5-PeCB (126)	0.1	0.1	0.005
	3,3',4,4',5,5'-HxCB (169)	0.01	0.001	0.00005
	2,3,3',4,4'-PeCB (105)	0.0001	0.0001	< 0.000005
	2,3,4,4',5-PeCB (114)	0.0005	0.0001	< 0.000005
	2,3',4,4',5-PeCB (118)	0.0001	0.00001	< 0.000005
	2',3,4,4',5-PeCB (123)	0.0001	0.00001	< 0.000005
	2,3,3',4,4',5-HxB (156)	0.0005	0.0001	< 0.000005
	2,3,3',4,4',5'-HxCB (157)	0.0005	0.0001	< 0.000005
	2,3',4,4',5,5'-HxCB (167)	0.00001	0.00001	< 0.000005
	2,3,3',4,4',5,5'-HpCB (189)	0.0001	0.00001	< 0.000005

TEF = Toxicity Equivalency Factor

TEF values are consensus estimates recommended by WHO (Van den Berg et al. 1998)

Table 2. Definition, Application, and Uses of Data Flags

Validation Flags	Meaning of Flags for Dioxin Analyses in Soils and Tissues by the MRI Lab	* Usability of DataSets	
		Full data set used (<i>semi-quantitative</i>)	Quantitative (qualified sub-set used)
E	Estimated Maximum Potential Concentration; the relative ion abundance ratios did not meet the acceptance limits.	use value	use ½ value
D	EMPC is caused by polychlorinated Diphenyl ether interference.	use ½ value	don't use
B	Analyte was detected in associated Method Blank, sample concentration <5x MB concentration.	use value	use ½ value
C	Concentration is above upper Calibration Standard; result is an estimate, flagged C by lab and J added by validator.	use value	use value
I	Recovery of 13C-labeled Isotopic analyte outside of criteria	use value	use value
J	Estimated: e.g., isotopic standard is outside CCAL range, native analyte recovery in LCS is outside criteria, etc.	use value	use ½ value
NJ	Presumptive evidence for the presence of an analyte with an estimated value; if used for 2378-TCDF, see "U" below.	use ½ value	don't use
S	Peak is Saturated; result, if calculated, is flagged by the validator as an estimate - "J".	use value	use value
U	Unconfirmed: column is not specific for 2,3,7,8-TCDF; confirmation not requested. Validator now uses "NJ" flag.	use value	use ½ value
R	Rejected: result is invalid and <u>not usable</u> .	use ½ EDL	don't use
<i>use of MRI Laboratory's reported "LT" (less than) values <MQL (10 x Signal:Noise)</i>			
LT applied first to data, then apply flags!	"LT" is not a true "flag", but if a LT result is a " detect " above the MDL (2.5 x Signal:Noise = lab EDL), then	use value	use ½ value
	"LT" is not a true "flag", but if a LT result is a " non-detect " below the MDL (2.5 x Signal:Noise = lab EDL), then	use ½ EDL	don't use

* Per concepts in the 1992 EPA Data Usability for Risk Assessment in Superfund guidance, the above flags are to be used for producing two data-sets: 1) a “**Full**” set of semi-quantitative results with an **actual or proxy value for each of the 29 measured congeners**; and 2) a “**Quantitative**” partial set of results with more certain identification and more accurate quantities of congeners which have **no disqualifying flags (D, JN, R or LT) or use limited proxies (E, B, J or U)**. This distinction is made to better understand and limit the artifactual impacts of the less certain estimated values on TEQs, analyzing this sensitivity by comparing TEQs from these two data-sets and evaluating congener profiles with only the analytes that are able to be quantitated.

Source: EPA R8 Soil and RMA Tissue Studies of Dioxins, 2000, ref. RMA/EAL SOP 803

Table 3. TEQ Values for RMA Random Grab Soil Samples

Section	Dioxins/Furans		PCBs		Total	
	Full	Quant	Full	Quant	Full	Quant
S1	25.40	24.63	0.82	0.48	26.22	25.11
S2	7.25	7.05	1.15	1.10	8.40	8.15
S3	0.66	0.60	0.35	0.33	1.01	0.93
S4	0.58	0.42	0.48	0.47	1.06	0.89
S5	1.82	1.50	0.22	0.20	2.04	1.70
S6	1.63	1.27	0.24	0.22	1.87	1.49
S7	0.97	0.91	0.41	0.40	1.38	1.31
S8	0.27	0.16	0.10	0.09	0.36	0.25
S9	1.57	1.36	1.24	1.23	2.81	2.58
S11	1.01	0.81	0.63	0.62	1.64	1.43
S12	0.71	0.36	0.35	0.33	1.06	0.69
S19	1.28	1.19	0.76	0.74	2.04	1.93
S20	0.68	0.36	0.20	0.19	0.88	0.55
S22	0.73	0.48	0.34	0.33	1.07	0.81
S23	0.35	0.23	0.11	0.06	0.46	0.29
S24	0.34	0.18	0.18	0.16	0.52	0.34
S25	0.14	0.02	0.04	0.01	0.18	0.02
S26	0.76	0.65	0.30	0.28	1.06	0.93
S27	0.21	0.18	0.22	0.21	0.43	0.39
S28	1.52	1.26	1.23	1.22	2.75	2.48
S29	0.30	0.21	0.14	0.13	0.43	0.33
S30	0.52	0.24	0.15	0.14	0.67	0.38
S31	1.95	1.65	0.39	0.37	2.34	2.03
S32	0.80	0.52	0.25	0.24	1.05	0.76
S33	0.83	0.57	0.79	0.78	1.62	1.35
S34	0.95	0.86	0.72	0.71	1.67	1.56
S35	3.59	3.16	1.51	0.83	5.09	3.99
S36	1.53	1.26	0.45	0.43	1.98	1.69

All TEQ values are expressed in units of ppt

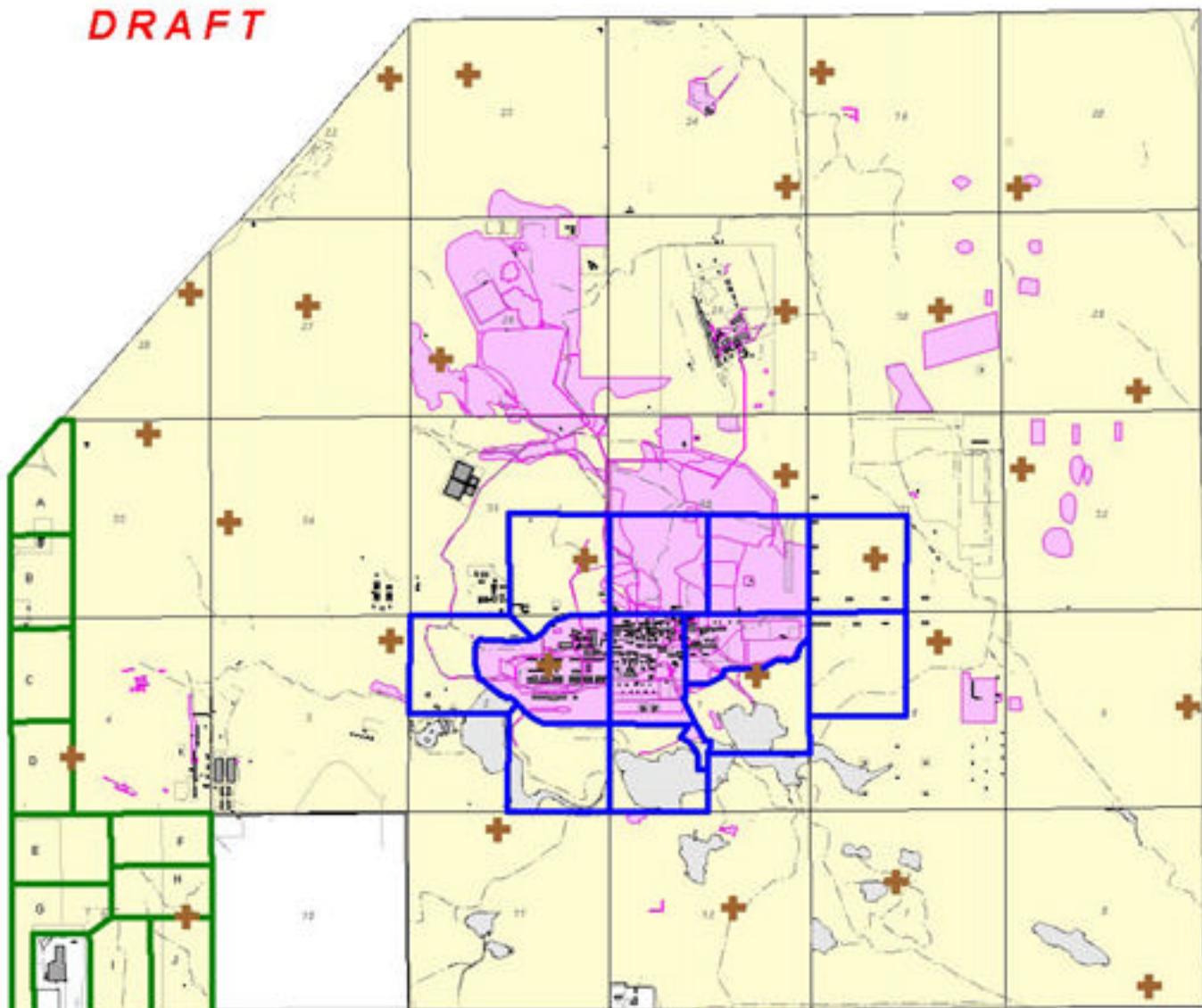
Table 4. Relative Contribution of Congeners to Full TEQ

Analyte	Mean Percent Contribution to TEQ	
	Full	Quant
2,3,7,8-TCDF	1.4%	0.0%
2,3,7,8-TCDD	1.4%	0.6%
1,2,3,7,8-PeCDF	2.7%	2.8%
2,3,4,7,8-PeCDF	9.4%	7.8%
1,2,3,7,8-PeCDD	9.5%	4.4%
1,2,3,4,7,8-HxCDF	8.5%	9.3%
1,2,3,6,7,8-HxCDF	5.4%	5.0%
2,3,4,6,7,8-HxCDF	3.2%	2.9%
1,2,3,7,8,9-HxCDF	5.0%	4.3%
1,2,3,4,7,8-HxCDD	1.9%	1.4%
1,2,3,6,7,8-HxCDD	3.8%	3.7%
1,2,3,7,8,9-HxCDD	4.4%	4.9%
1,2,3,4,6,7,8-HpCDF	3.8%	4.6%
1,2,3,4,7,8,9-HpCDF	1.2%	1.3%
1,2,3,4,6,7,8-HpCDD	7.3%	11.1%
OCDF	0.3%	0.3%
OCDD	0.6%	0.9%
PCB-81	0.0%	0.0%
PCB-77	0.1%	0.1%
PCB-123	0.0%	0.0%
PCB-118	1.3%	1.1%
PCB-114	0.1%	0.1%
PCB-105	0.6%	0.7%
PCB-126	26.4%	30.8%
PCB-167	0.0%	0.0%
PCB-156	1.0%	1.2%
PCB-157	0.3%	0.3%
PCB-169	0.3%	0.3%
PCB-189	0.0%	0.0%
Dioxins/Furans only	69.8%	65.3%
PCBs only	30.2%	34.7%
All	100.0%	100.0%

Cells greater than 5% have been shaded to highlight the main contributors

Draft Results of Dioxins (TEQ, ppt) in Soils at RMA

DRAFT



- South Plants Study Area
- Western Tier Parcel Study Area
- ✚ Random Grab Sample Sites

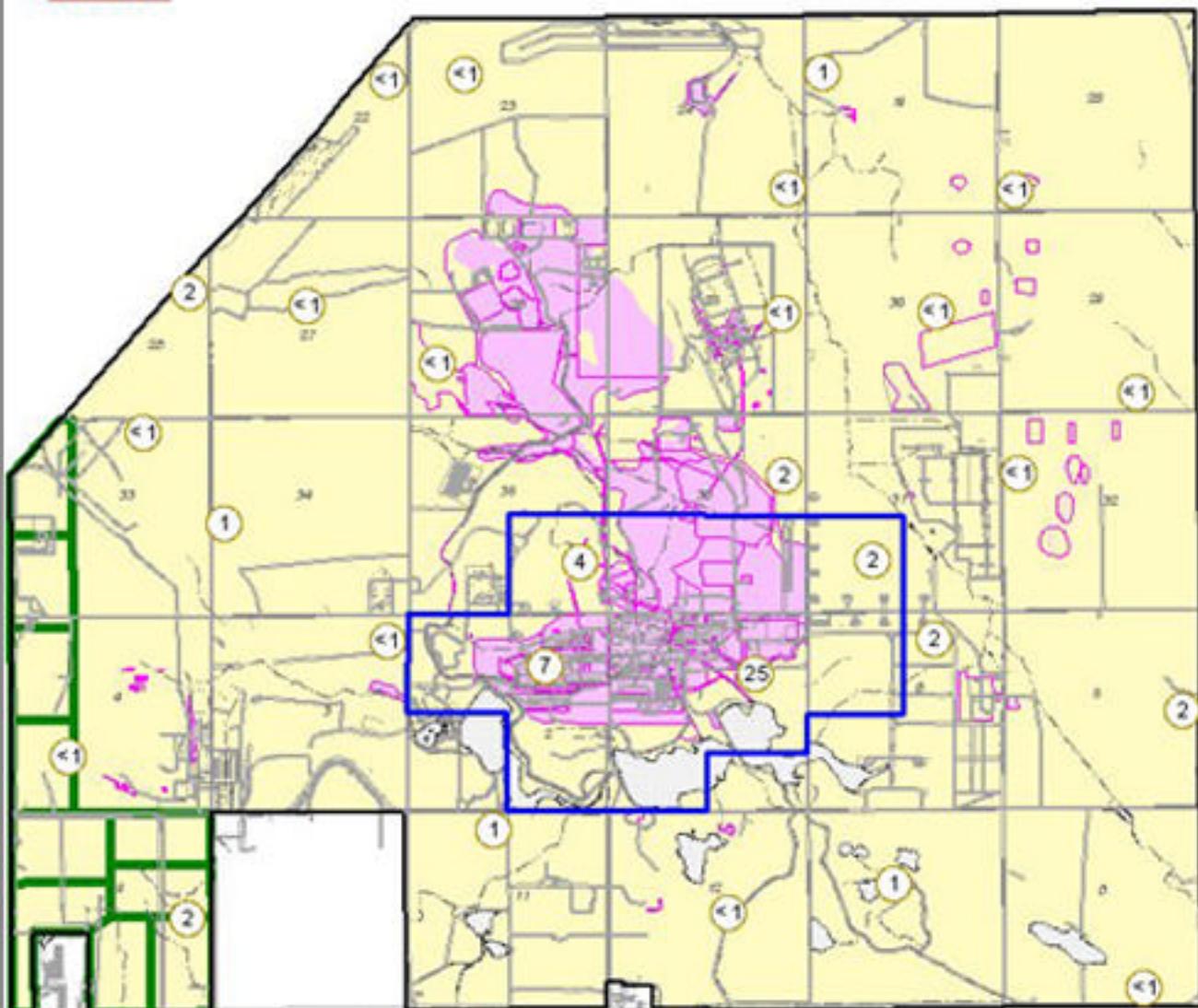
0 2000 4000 Feet
Scale Bar



**ROCKY MOUNTAIN ARSENAL
RANDOM GRAB SAMPLE LOCATIONS**

Draft Results of Dioxins (TEQ, ppt) in Soils at RMA

DRAFT



FEDERAL ENERGY MANAGEMENT & PLANNING PROGRAM

Legend

- (1) Random Grab Sites
- (Blue Box) South Plants Study Area
- (Green Box) Western Tier Parcel

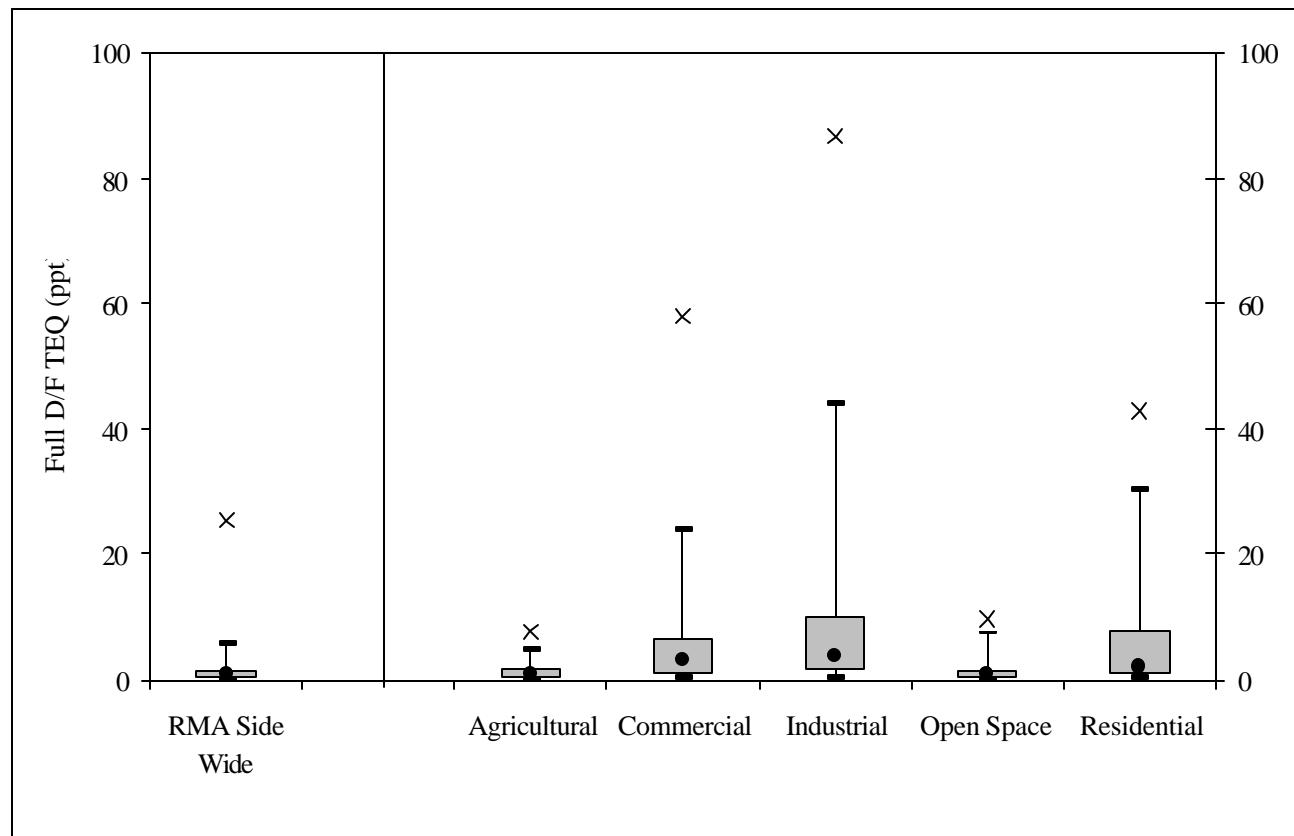


300 0 300 600 Feet



**ROCKY MOUNTAIN ARSENAL
RANDOM SITE LOCATIONS
TOXICITY EQUIVALENT VALUES (ppt)
FROM COMPOSITE SOIL SAMPLES**

Figure 3. Comparison of RMA Random Samples to Denver Front Range Soils



APPENDIX A
RAW ANALYTICAL DATA AND CALCULATION OF TEQ VALUES

Sample ID	102	Field		S4								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0921	0.3684		E		0.04605		0.1	0.0	0.0	0.4%	0.0%
2,3,7,8-TCDD	0.00249	0.01		--		0.001245		1	0.0	0.0	0.1%	0.0%
1,2,3,7,8-PeCDF	0.00148	0.0059	0.18	--		0.18	0.18	0.05	0.0	0.0	0.8%	1.0%
2,3,4,7,8-PeCDF	0.239	0.956		E		0.1195		0.5	0.1	0.0	5.6%	0.0%
1,2,3,7,8-PeCDD	0.0191	0.0764	0.22	--		0.22	0.22	1	0.2	0.2	20.7%	24.8%
1,2,3,4,7,8-HxCDF	0.241	0.964		E	<5*B	0.1205		0.1	0.0	0.0	1.1%	0.0%
1,2,3,6,7,8-HxCDF	0.168	0.672		E		0.084		0.1	0.0	0.0	0.8%	0.0%
2,3,4,6,7,8-HxCDF	0.0314	0.1256	0.426	B	<5*B	0.426	0.213	0.1	0.0	0.0	4.0%	2.4%
1,2,3,7,8,9-HxCDF	0.0377	0.1508	0.268	B	<5*B	0.268	0.134	0.1	0.0	0.0	2.5%	1.5%
1,2,3,4,7,8-HxCDD	0.315	1.26		E		0.1575		0.1	0.0	0.0	1.5%	0.0%
1,2,3,6,7,8-HxCDD	0.377	1.508		E		0.1885		0.1	0.0	0.0	1.8%	0.0%
1,2,3,7,8,9-HxCDD	0.00169	0.0068	0.233	--		0.233	0.233	0.1	0.0	0.0	2.2%	2.6%
1,2,3,4,6,7,8-HpCDF	0.0225	0.09	2.37	--		2.37	2.37	0.01	0.0	0.0	2.2%	2.7%
1,2,3,4,7,8,9-HpCDF	0.0251	0.1004	0.32	--		0.32	0.32	0.01	0.0	0.0	0.3%	0.4%
1,2,3,4,6,7,8-HpCDD	0.0392	0.1568	10	--		10	10	0.01	0.1	0.1	9.4%	11.3%
OCDF	0.0209	0.0836	5.12	--		5.12	5.12	0.0001	0.0	0.0	0.0%	0.1%
OCDD	0.0173	0.0692	80.4	--		80.4	80.4	0.0001	0.0	0.0	0.8%	0.9%
PCB-81	0.198	0.792	0.927	B	<5*B	0.927	0.4635	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.187	0.748	12.8	B	<5*B	12.8	6.4	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	0.414	1.656	5.85	B	<5*B	5.85	2.925	0.0001	0.0	0.0	0.1%	0.0%
PCB-118	0.368	1.472	356	J		356	178	0.0001	0.0	0.0	3.4%	2.0%
PCB-114	0.407	1.628	6.9	--		6.9	6.9	0.0005	0.0	0.0	0.3%	0.4%
PCB-105	0.41	1.64	148	--		148	148	0.0001	0.0	0.0	1.4%	1.7%
PCB-126	0.117	0.468	3.87	--		3.87	3.87	0.1	0.4	0.4	36.4%	43.6%
PCB-167	0.127	0.508	21.7	J		21.7	10.85	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.131	0.524	59	--		59	59	0.0005	0.0	0.0	2.8%	3.3%
PCB-157	0.138	0.552	12.9	--		12.9	12.9	0.0005	0.0	0.0	0.6%	0.7%
PCB-169	0.0417	0.1668	0.493	--		0.493	0.493	0.01	0.0	0.0	0.5%	0.6%
PCB-189	0.059	0.236	3.88	--		3.88	3.88	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.6	0.4	0.5	0.5	1.1	0.9

Sample ID	187	Field		S19								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0312	0.1248	0.294	NJ		0.147	0	0.1	0.0	0.0	0.7%	0.0%
2,3,7,8-TCDD	0.0178	0.0712		--		0.0089		1	0.0	0.0	0.4%	0.0%
1,2,3,7,8-PeCDF	0.623	2.492		E		0.3115		0.05	0.0	0.0	0.8%	0.0%
2,3,4,7,8-PeCDF	0.044	0.176	0.493	--		0.493	0.493	0.5	0.2	0.2	12.1%	12.7%
1,2,3,7,8-PeCDD	0.0219	0.0876	0.375	--		0.375	0.375	1	0.4	0.4	18.4%	19.4%
1,2,3,4,7,8-HxCDF	0.0534	0.2136	0.983	--		0.983	0.983	0.1	0.1	0.1	4.8%	5.1%
1,2,3,6,7,8-HxCDF	0.0468	0.1872	0.67	--		0.67	0.67	0.1	0.1	0.1	3.3%	3.5%
2,3,4,6,7,8-HxCDF	0.052	0.208	0.652	--		0.652	0.652	0.1	0.1	0.1	3.2%	3.4%
1,2,3,7,8,9-HxCDF	0.0581	0.2324	0.5	B	<5*B	0.5	0.25	0.1	0.1	0.0	2.5%	1.3%
1,2,3,4,7,8-HxCDD	0.368	1.472		E		0.184		0.1	0.0	0.0	0.9%	0.0%
1,2,3,6,7,8-HxCDD	0.0145	0.058	0.533	--		0.533	0.533	0.1	0.1	0.1	2.6%	2.8%
1,2,3,7,8,9-HxCDD	0.0157	0.0628	0.628	--		0.628	0.628	0.1	0.1	0.1	3.1%	3.2%
1,2,3,4,6,7,8-HpCDF	0.0161	0.0644	4.61	--		4.61	4.61	0.01	0.0	0.0	2.3%	2.4%
1,2,3,4,7,8,9-HpCDF	0.0204	0.0816	1.05	--		1.05	1.05	0.01	0.0	0.0	0.5%	0.5%
1,2,3,4,6,7,8-HpCDD	0.049	0.196	13.2	--		13.2	13.2	0.01	0.1	0.1	6.5%	6.8%
OCDF	0.0161	0.0644	19	--		19	19	0.0001	0.0	0.0	0.1%	0.1%
OCDD	0.00776	0.0310	97.6	--		97.6	97.6	0.0001	0.0	0.0	0.5%	0.5%
PCB-81	0.0725	0.29	1.13	B	<5*B	1.13	0.565	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0698	0.2792	29.5	--		29.5	29.5	0.0001	0.0	0.0	0.1%	0.2%
PCB-123	2.95	11.8	8.28	--		8.28	4.14	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	2.62	10.48	354	J		354	177	0.0001	0.0	0.0	1.7%	0.9%
PCB-114	3.04	12.16	7.94	--		7.94	3.97	0.0005	0.0	0.0	0.2%	0.1%
PCB-105	3.06	12.24	183	--		183	183	0.0001	0.0	0.0	0.9%	0.9%
PCB-126	0.0986	0.3944	6.5	--		6.5	6.5	0.1	0.7	0.7	31.9%	33.6%
PCB-167	0.423	1.692	28.2	J		28.2	14.1	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.436	1.744	64.2	--		64.2	64.2	0.0005	0.0	0.0	1.6%	1.7%
PCB-157	0.459	1.836	15.8	--		15.8	15.8	0.0005	0.0	0.0	0.4%	0.4%
PCB-169	0.0454	0.1816	0.774	--		0.774	0.774	0.01	0.0	0.0	0.4%	0.4%
PCB-189	0.0926	0.3704	9.31	--		9.31	9.31	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.3	1.2	0.8	0.7	2.0	1.9

Sample ID	234	Field	S5	MRI erred on lab w/ 243								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0294	0.1176	0.386	NJ		0.193	0	0.1	0.0	0.0		
2,3,7,8-TCDD	0.0205	0.082	0.934	--		0.934	0.934	1	0.9	0.9		
1,2,3,7,8-PeCDF	0.14	0.56	0.683	--		0.683	0.683	0.05	0.0	0.0		
2,3,4,7,8-PeCDF	0.117	0.468	0.414	--		0.414	0.207	0.5	0.2	0.1		
1,2,3,7,8-PeCDD	0.275	1.1		E		0.1375		1	0.1	0.0		
1,2,3,4,7,8-HxCDF	0.0727	0.2908	1	--		1	1	0.1	0.1	0.1		
1,2,3,6,7,8-HxCDF	0.0624	0.2496	0.686	B	<5*B	0.686	0.343	0.1	0.1	0.0		
2,3,4,6,7,8-HxCDF	0.0763	0.3052	0.426	--		0.426	0.426	0.1	0.0	0.0		
1,2,3,7,8,9-HxCDF	0.0894	0.3576	0.508	--		0.508	0.508	0.1	0.1	0.1		
1,2,3,4,7,8-HxCDD	0.205	0.82		E		0.1025		0.1	0.0	0.0		
1,2,3,6,7,8-HxCDD	0.0103	0.0412	0.401	--		0.401	0.401	0.1	0.0	0.0		
1,2,3,7,8,9-HxCDD	0.0122	0.0488	0.341	J		0.341	0.1705	0.1	0.0	0.0		
1,2,3,4,6,7,8-HpCDF	0.0256	0.1024	3.62	--		3.62	3.62	0.01	0.0	0.0		
1,2,3,4,7,8,9-HpCDF	0.0382	0.1528	1.12	--		1.12	1.12	0.01	0.0	0.0		
1,2,3,4,6,7,8-HpCDD	0.0243	0.0972	8.44	--		8.44	8.44	0.01	0.1	0.1		
OCDF	0.0257	0.1028	18	--		18	18	0.0001	0.0	0.0		
OCDD	0.0261	0.1044	71.9	--		71.9	71.9	0.0001	0.0	0.0		
PCB-81	0.0983	0.3932	0.661	B	<5*B	0.661	0.3305	0.0001	0.0	0.0		
PCB-77	0.0698	0.2792	6.18	B	<5*B	6.18	3.09	0.0001	0.0	0.0		
PCB-123	0.811	3.244	2.76	B	<5*B	2.76	0.69	0.0001	0.0	0.0		
PCB-118	0.713	2.852	72.6	BJ	<5*B	72.6	36.3	0.0001	0.0	0.0		
PCB-114	0.695	2.78	1.41	B	<5*B	1.41	0.3525	0.0005	0.0	0.0		
PCB-105	0.665	2.66	33	B	<5*B	33	16.5	0.0001	0.0	0.0		
PCB-126	0.135	0.54	1.89	--		1.89	1.89	0.1	0.2	0.2		
PCB-167	0.199	0.796	8.29	--		8.29	8.29	0.00001	0.0	0.0		
PCB-156	0.196	0.784	15.7	B	<5*B	15.7	7.85	0.0005	0.0	0.0		
PCB-157	0.202	0.808	4.58	B	<5*B	4.58	2.29	0.0005	0.0	0.0		
PCB-169	0.0662	0.2648	0.422	--		0.422	0.422	0.01	0.0	0.0		
PCB-189	0.189	0.756	2.46	--		2.46	2.46	0.0001	0.0	0.0		

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.8	1.5	0.2	0.2	2.0	1.7

Sample ID	249	Field		S9								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.319	1.276		E		0.1595		0.1	0.0	0.0	0.6%	0.0%
2,3,7,8-TCDD	0.0024	0.0096		--		0.0012		1	0.0	0.0	0.0%	0.0%
1,2,3,7,8-PeCDF	0.437	1.748		E		0.2185		0.05	0.0	0.0	0.4%	0.0%
2,3,4,7,8-PeCDF	0.539	2.156		E		0.2695		0.5	0.1	0.0	4.8%	0.0%
1,2,3,7,8-PeCDD	0.00221	0.0088	0.486	--		0.486	0.486	1	0.5	0.5	17.3%	18.8%
1,2,3,4,7,8-HxCDF	0.0541	0.2164	0.654	--		0.654	0.654	0.1	0.1	0.1	2.3%	2.5%
1,2,3,6,7,8-HxCDF	0.0483	0.1932	0.469	--		0.469	0.469	0.1	0.0	0.0	1.7%	1.8%
2,3,4,6,7,8-HxCDF	0.0547	0.2188	0.752	--		0.752	0.752	0.1	0.1	0.1	2.7%	2.9%
1,2,3,7,8,9-HxCDF	0.0601	0.2404	0.387	B	<5*B	0.387	0.1935	0.1	0.0	0.0	1.4%	0.7%
1,2,3,4,7,8-HxCDD	0.692	2.768		E		0.346		0.1	0.0	0.0	1.2%	0.0%
1,2,3,6,7,8-HxCDD	0.00169	0.0068	1.31	--		1.31	1.31	0.1	0.1	0.1	4.7%	5.1%
1,2,3,7,8,9-HxCDD	0.00164	0.0066	0.819	--		0.819	0.819	0.1	0.1	0.1	2.9%	3.2%
1,2,3,4,6,7,8-HpCDF	0.0571	0.2284	6.42	--		6.42	6.42	0.01	0.1	0.1	2.3%	2.5%
1,2,3,4,7,8,9-HpCDF	0.0825	0.33	0.657	--		0.657	0.657	0.01	0.0	0.0	0.2%	0.3%
1,2,3,4,6,7,8-HpCDD	0.0191	0.0764	34.6	--		34.6	34.6	0.01	0.3	0.3	12.3%	13.4%
OCDF	0.00597	0.0239	19.1	--		19.1	19.1	0.0001	0.0	0.0	0.1%	0.1%
OCDD	0.0226	0.0904	311	--		311	311	0.0001	0.0	0.0	1.1%	1.2%
PCB-81	0.03	0.12	1.51	B	<5*B	1.51	0.755	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0261	0.1044	37.6	--		37.6	37.6	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	1.21	4.84	7.75	--		7.75	7.75	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	1.08	4.32	254	BJ	<5*B	254	127	0.0001	0.0	0.0	0.9%	0.5%
PCB-114	1.22	4.88	4.94	--		4.94	4.94	0.0005	0.0	0.0	0.1%	0.1%
PCB-105	1.22	4.88	133	--		133	133	0.0001	0.0	0.0	0.5%	0.5%
PCB-126	0.0554	0.2216	11.4	--		11.4	11.4	0.1	1.1	1.1	40.5%	44.2%
PCB-167	0.197	0.788	26.6	J		26.6	13.3	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.203	0.812	61.5	--		61.5	61.5	0.0005	0.0	0.0	1.1%	1.2%
PCB-157	0.214	0.856	14.5	--		14.5	14.5	0.0005	0.0	0.0	0.3%	0.3%
PCB-169	0.0221	0.0884	1.45	--		1.45	1.45	0.01	0.0	0.0	0.5%	0.6%
PCB-189	0.114	0.456	8.19	--		8.19	8.19	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.6	1.4	1.2	1.2	2.8	2.6

Sample ID	264	Field	S28										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.0316	0.1264	0.442	NJ		0.221	0	0.1	0.0	0.0	0.8%	0.0%	
2,3,7,8-TCDD	0.00193	0.0077	--		0.000965			1	0.0	0.0	0.0%	0.0%	
1,2,3,7,8-PeCDF	0.0101	0.0404	0.535	--		0.535	0.535	0.05	0.0	0.0	1.0%	1.1%	
2,3,4,7,8-PeCDF	0.00807	0.0323	0.799	--		0.799	0.799	0.5	0.4	0.4	14.5%	16.1%	
1,2,3,7,8-PeCDD	0.404	1.616	--	E		0.202		1	0.2	0.0	7.4%	0.0%	
1,2,3,4,7,8-HxCDF	0.0315	0.126	0.879	--		0.879	0.879	0.1	0.1	0.1	3.2%	3.5%	
1,2,3,6,7,8-HxCDF	0.026	0.104	0.606	--		0.606	0.606	0.1	0.1	0.1	2.2%	2.4%	
2,3,4,6,7,8-HxCDF	0.0296	0.1184	0.881	--		0.881	0.881	0.1	0.1	0.1	3.2%	3.6%	
1,2,3,7,8,9-HxCDF	0.0322	0.1288	0.513	B	<5*B	0.513	0.2565	0.1	0.1	0.0	1.9%	1.0%	
1,2,3,4,7,8-HxCDD	0.00112	0.0045	0.618	--		0.618	0.618	0.1	0.1	0.1	2.2%	2.5%	
1,2,3,6,7,8-HxCDD	0.00106	0.0042	0.92	--		0.92	0.92	0.1	0.1	0.1	3.3%	3.7%	
1,2,3,7,8,9-HxCDD	0.00112	0.0045	0.974	--		0.974	0.974	0.1	0.1	0.1	3.5%	3.9%	
1,2,3,4,6,7,8-HpCDF	0.0329	0.1316	6.34	--		6.34	6.34	0.01	0.1	0.1	2.3%	2.6%	
1,2,3,4,7,8,9-HpCDF	0.0424	0.1696	0.885	--		0.885	0.885	0.01	0.0	0.0	0.3%	0.4%	
1,2,3,4,6,7,8-HpCDD	0.0343	0.1372	23.3	--		23.3	23.3	0.01	0.2	0.2	8.5%	9.4%	
OCDF	0.0091	0.0364	15.6	--		15.6	15.6	0.0001	0.0	0.0	0.1%	0.1%	
OCDD	0.00688	0.0275	180	--		180	180	0.0001	0.0	0.0	0.7%	0.7%	
PCB-81	0.0956	0.3824	2.07	B	<5*B	2.07	1.035	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.0897	0.3588	59.1	--		59.1	59.1	0.0001	0.0	0.0	0.2%	0.2%	
PCB-123	0.463	1.852	--	<5*B	0.2315			0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.412	1.648	316	J		316	158	0.0001	0.0	0.0	1.2%	0.6%	
PCB-114	0.494	1.976	6.82	--		6.82	6.82	0.0005	0.0	0.0	0.1%	0.1%	
PCB-105	0.497	1.988	178	--		178	178	0.0001	0.0	0.0	0.6%	0.7%	
PCB-126	0.06	0.24	11.2	--		11.2	11.2	0.1	1.1	1.1	40.8%	45.2%	
PCB-167	0.39	1.56	24.2	J		24.2	12.1	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.402	1.608	64.8	--		64.8	64.8	0.0005	0.0	0.0	1.2%	1.3%	
PCB-157	0.424	1.696	16	--		16	16	0.0005	0.0	0.0	0.3%	0.3%	
PCB-169	0.00883	0.0353	1.17	--		1.17	1.17	0.01	0.0	0.0	0.4%	0.5%	
PCB-189	0.331	1.324	8.26	--		8.26	8.26	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.5	1.3	1.2	1.2	2.7	2.5

Sample ID	291	Field	S20										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.08	0.32	0.131	NJ		0.0655	0	0.1	0.0	0.0	0.7%	0.0%	
2,3,7,8-TCDD	0.0489	0.1956		--		0.02445		1	0.0	0.0	2.8%	0.0%	
1,2,3,7,8-PeCDF	0.0355	0.142	0.21	--		0.21	0.21	0.05	0.0	0.0	1.2%	1.9%	
2,3,4,7,8-PeCDF	0.189	0.756		E		0.0945		0.5	0.0	0.0	5.4%	0.0%	
1,2,3,7,8-PeCDD	0.383	1.532		E		0.1915		1	0.2	0.0	21.7%	0.0%	
1,2,3,4,7,8-HxCDF	0.0437	0.1748	0.527	--		0.527	0.527	0.1	0.1	0.1	6.0%	9.5%	
1,2,3,6,7,8-HxCDF	0.0373	0.1492	0.434	--		0.434	0.434	0.1	0.0	0.0	4.9%	7.8%	
2,3,4,6,7,8-HxCDF	0.0411	0.1644	0.349	B	<5*B	0.349	0.1745	0.1	0.0	0.0	4.0%	3.1%	
1,2,3,7,8,9-HxCDF	0.0464	0.1856	0.422	B	<5*B	0.422	0.211	0.1	0.0	0.0	4.8%	3.8%	
1,2,3,4,7,8-HxCDD	0.176	0.704		E		0.088		0.1	0.0	0.0	1.0%	0.0%	
1,2,3,6,7,8-HxCDD	0.0341	0.1364	0.492	--		0.492	0.492	0.1	0.0	0.0	5.6%	8.9%	
1,2,3,7,8,9-HxCDD	0.037	0.148	0.6	--		0.6	0.6	0.1	0.1	0.1	6.8%	10.8%	
1,2,3,4,6,7,8-HpCDF	0.0265	0.106	3.79	--		3.79	3.79	0.01	0.0	0.0	4.3%	6.8%	
1,2,3,4,7,8,9-HpCDF	0.0374	0.1496	0.957	--		0.957	0.957	0.01	0.0	0.0	1.1%	1.7%	
1,2,3,4,6,7,8-HpCDD	0.0223	0.0892	5.42	--		5.42	5.42	0.01	0.1	0.1	6.1%	9.8%	
OCDF	0.0127	0.0508	20.6	--		20.6	20.6	0.0001	0.0	0.0	0.2%	0.4%	
OCDD	0.0254	0.1016	41	--		41	41	0.0001	0.0	0.0	0.5%	0.7%	
PCB-81	0.337	1.348	1.05	B	<5*B	1.05	0.2625	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.296	1.184	6.95	B	<5*B	6.95	3.475	0.0001	0.0	0.0	0.1%	0.1%	
PCB-123	0.927	3.708	2.43	B	<5*B	2.43	0.6075	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.824	3.296	84.9	BJ	<5*B	84.9	42.45	0.0001	0.0	0.0	1.0%	0.8%	
PCB-114	0.984	3.936	1.16	--		1.16	0.58	0.0005	0.0	0.0	0.1%	0.1%	
PCB-105	0.991	3.964	36	B	<5*B	36	18	0.0001	0.0	0.0	0.4%	0.3%	
PCB-126	0.154	0.616	1.79	--		1.79	1.79	0.1	0.2	0.2	20.3%	32.3%	
PCB-167	0.133	0.532	6.18	BJ	<5*B	6.18	3.09	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.137	0.548	11.9	B	<5*B	11.9	5.95	0.0005	0.0	0.0	0.7%	0.5%	
PCB-157	4.52	18.08		E	<5*B	2.26		0.0005	0.0	0.0	0.1%	0.0%	
PCB-169	0.0798	0.3192	0.361	--		0.361	0.361	0.01	0.0	0.0	0.4%	0.7%	
PCB-189	1.77	7.08		E		0.885		0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.7	0.4	0.2	0.2	0.9	0.6

Sample ID	318	Field	S11									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0589	0.2356	0.375	NJ		0.1875	0	0.1	0.0	0.0	1.1%	0.0%
2,3,7,8-TCDD	0.0316	0.1264		--		0.0158		1	0.0	0.0	1.0%	0.0%
1,2,3,7,8-PeCDF	0.0928	0.3712	1.01	--		1.01	1.01	0.05	0.1	0.1	3.1%	3.5%
2,3,4,7,8-PeCDF	0.0685	0.274	0.413	--		0.413	0.413	0.5	0.2	0.2	12.6%	14.4%
1,2,3,7,8-PeCDD	0.0456	0.1824		--		0.0228		1	0.0	0.0	1.4%	0.0%
1,2,3,4,7,8-HxCDF	0.0515	0.206	1.42	--		1.42	1.42	0.1	0.1	0.1	8.7%	9.9%
1,2,3,6,7,8-HxCDF	0.0472	0.1888	0.919	B	<5*B	0.919	0.4595	0.1	0.1	0.0	5.6%	3.2%
2,3,4,6,7,8-HxCDF	0.0544	0.2176		--		0.0272		0.1	0.0	0.0	0.2%	0.0%
1,2,3,7,8,9-HxCDF	0.0651	0.2604	0.615	--		0.615	0.615	0.1	0.1	0.1	3.8%	4.3%
1,2,3,4,7,8-HxCDD	0.518	2.072		E		0.259		0.1	0.0	0.0	1.6%	0.0%
1,2,3,6,7,8-HxCDD	0.689	2.756		E		0.3445		0.1	0.0	0.0	2.1%	0.0%
1,2,3,7,8,9-HxCDD	0.0267	0.1068	0.703	J		0.703	0.3515	0.1	0.1	0.0	4.3%	2.5%
1,2,3,4,6,7,8-HpCDF	0.0414	0.1656	5.79	--		5.79	5.79	0.01	0.1	0.1	3.5%	4.1%
1,2,3,4,7,8,9-HpCDF	0.0652	0.2608	1.68	--		1.68	1.68	0.01	0.0	0.0	1.0%	1.2%
1,2,3,4,6,7,8-HpCDD	0.0536	0.2144	17.7	--		17.7	17.7	0.01	0.2	0.2	10.8%	12.4%
OCDF	0.0447	0.1788	24	--		24	24	0.0001	0.0	0.0	0.1%	0.2%
OCDD	0.0355	0.142	143	--		143	143	0.0001	0.0	0.0	0.9%	1.0%
PCB-81	0.0973	0.3892	0.996	B	<5*B	0.996	0.498	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0862	0.3448	16.8	--		16.8	16.8	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	2.85	11.4	4.15	--		4.15	2.075	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	2.51	10.04	134	J		134	67	0.0001	0.0	0.0	0.8%	0.5%
PCB-114	2.37	9.48		--	<5*B	1.185		0.0005	0.0	0.0	0.0%	0.0%
PCB-105	2.27	9.08	65.1	--		65.1	65.1	0.0001	0.0	0.0	0.4%	0.5%
PCB-126	0.053	0.212	5.75	--		5.75	5.75	0.1	0.6	0.6	35.1%	40.2%
PCB-167	0.33	1.32	15.8	--		15.8	15.8	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.324	1.296	29	--		29	29	0.0005	0.0	0.0	0.9%	1.0%
PCB-157	0.335	1.34	8.13	--		8.13	8.13	0.0005	0.0	0.0	0.2%	0.3%
PCB-169	0.0678	0.2712	0.984	--		0.984	0.984	0.01	0.0	0.0	0.6%	0.7%
PCB-189	0.223	0.892	4.43	--		4.43	4.43	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.0	0.8	0.6	0.6	1.6	1.4

Sample ID	385	Field	S24									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0591	0.2364	0.289	NJ		0.1445	0	0.1	0.0	0.0	2.8%	0.0%
2,3,7,8-TCDD	0.0243	0.0972		--		0.01215		1	0.0	0.0	2.3%	0.0%
1,2,3,7,8-PeCDF	0.0272	0.1088	0.516	--		0.516	0.516	0.05	0.0	0.0	4.9%	7.5%
2,3,4,7,8-PeCDF	0.2	0.8		E		0.1		0.5	0.1	0.0	9.6%	0.0%
1,2,3,7,8-PeCDD	0.0214	0.0856		--		0.0107		1	0.0	0.0	2.0%	0.0%
1,2,3,4,7,8-HxCDF	0.0366	0.1464	0.379	B	<5*B	0.379	0.1895	0.1	0.0	0.0	7.3%	5.5%
1,2,3,6,7,8-HxCDF	0.3	1.2		E		0.15		0.1	0.0	0.0	2.9%	0.0%
2,3,4,6,7,8-HxCDF	0.0358	0.1432	0.313	B	<5*B	0.313	0.1565	0.1	0.0	0.0	6.0%	4.6%
1,2,3,7,8,9-HxCDF	0.325	1.3		E	<5*B	0.1625		0.1	0.0	0.0	3.1%	0.0%
1,2,3,4,7,8-HxCDD	0.213	0.852		E		0.1065		0.1	0.0	0.0	2.0%	0.0%
1,2,3,6,7,8-HxCDD	0.0111	0.0444	0.259	--		0.259	0.259	0.1	0.0	0.0	5.0%	7.6%
1,2,3,7,8,9-HxCDD	0.012	0.048	0.329	--		0.329	0.329	0.1	0.0	0.0	6.3%	9.6%
1,2,3,4,6,7,8-HpCDF	0.0166	0.0664	1.38	--		1.38	1.38	0.01	0.0	0.0	2.6%	4.0%
1,2,3,4,7,8,9-HpCDF	0.0231	0.0924	0.371	--		0.371	0.371	0.01	0.0	0.0	0.7%	1.1%
1,2,3,4,6,7,8-HpCDD	0.016	0.064	4.12	--		4.12	4.12	0.01	0.0	0.0	7.9%	12.0%
OCDF	0.0188	0.0752	4.67	--		4.67	4.67	0.0001	0.0	0.0	0.1%	0.1%
OCDD	0.0116	0.0464	28.1	--		28.1	28.1	0.0001	0.0	0.0	0.5%	0.8%
PCB-81	0.147	0.588	0.704	B	<5*B	0.704	0.352	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.131	0.524	5.98	B	<5*B	5.98	2.99	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	0.92	3.68		--	<5*B	0.46		0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.818	3.272	122	BJ	<5*B	122	61	0.0001	0.0	0.0	2.3%	1.8%
PCB-114	2.14	8.56		E		1.07		0.0005	0.0	0.0	0.1%	0.0%
PCB-105	0.956	3.824	53.7	B	<5*B	53.7	26.85	0.0001	0.0	0.0	1.0%	0.8%
PCB-126	0.11	0.44	1.46	--		1.46	1.46	0.1	0.1	0.1	27.9%	42.6%
PCB-167	0.206	0.824	7.18	BJ	<5*B	7.18	3.59	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.212	0.848	16.8	B	<5*B	16.8	8.4	0.0005	0.0	0.0	1.6%	1.2%
PCB-157	0.224	0.896	4.27	B	<5*B	4.27	2.135	0.0005	0.0	0.0	0.4%	0.3%
PCB-169	0.0544	0.2176	0.192	--		0.192	0.096	0.01	0.0	0.0	0.4%	0.3%
PCB-189	0.287	1.148	2.55	--		2.55	2.55	0.0001	0.0	0.0	0.0%	0.1%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.3	0.2	0.2	0.2	0.5	0.3

Sample ID	443	Field	S29									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.154	0.616		E		0.077		0.1	0.0	0.0	1.8%	0.0%
2,3,7,8-TCDD	0.00467	0.0187		--		0.002335		1	0.0	0.0	0.5%	0.0%
1,2,3,7,8-PeCDF	0.27	1.08		E		0.135		0.05	0.0	0.0	1.6%	0.0%
2,3,4,7,8-PeCDF	0.0327	0.1308		--		0.01635		0.5	0.0	0.0	1.9%	0.0%
1,2,3,7,8-PeCDD	0.00807	0.0323		--		0.004035		1	0.0	0.0	0.9%	0.0%
1,2,3,4,7,8-HxCDF	0.0507	0.2028	0.466	--		0.466	0.466	0.1	0.0	0.0	10.7%	13.9%
1,2,3,6,7,8-HxCDF	0.429	1.716		E	<5*B	0.2145		0.1	0.0	0.0	4.9%	0.0%
2,3,4,6,7,8-HxCDF	0.285	1.14		E		0.1425		0.1	0.0	0.0	3.3%	0.0%
1,2,3,7,8,9-HxCDF	0.0646	0.2584	0.499	--		0.499	0.499	0.1	0.0	0.0	11.5%	14.9%
1,2,3,4,7,8-HxCDD	0.00933	0.0373	0.289	--		0.289	0.289	0.1	0.0	0.0	6.7%	8.6%
1,2,3,6,7,8-HxCDD	0.00698	0.0279	0.36	--		0.36	0.36	0.1	0.0	0.0	8.3%	10.8%
1,2,3,7,8,9-HxCDD	0.271	1.084		EJ		0.1355		0.1	0.0	0.0	3.1%	0.0%
1,2,3,4,6,7,8-HpCDF	1.88	7.52		E	<5*B	0.94		0.01	0.0	0.0	2.2%	0.0%
1,2,3,4,7,8,9-HpCDF	0.591	2.364		E		0.2955		0.01	0.0	0.0	0.7%	0.0%
1,2,3,4,6,7,8-HpCDD	0.0515	0.206	4.27	--		4.27	4.27	0.01	0.0	0.0	9.8%	12.8%
OCDF	0.0373	0.1492	6.93	--		6.93	6.93	0.0001	0.0	0.0	0.2%	0.2%
OCDD	0.0416	0.1664	29.8	--		29.8	29.8	0.0001	0.0	0.0	0.7%	0.9%
PCB-81	0.0599	0.2396	0.713	B	<5*B	0.713	0.3565	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0547	0.2188	6.53	B	<5*B	6.53	3.265	0.0001	0.0	0.0	0.2%	0.1%
PCB-123	0.55	2.2	1.93	B	<5*B	1.93	0.4825	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.484	1.936	63.6	BJ	<5*B	63.6	31.8	0.0001	0.0	0.0	1.5%	1.0%
PCB-114	0.486	1.944	1.53	B	<5*B	1.53	0.3825	0.0005	0.0	0.0	0.2%	0.1%
PCB-105	0.465	1.86	31.6	B	<5*B	31.6	15.8	0.0001	0.0	0.0	0.7%	0.5%
PCB-126	0.0634	0.2536	1.16	--		1.16	1.16	0.1	0.1	0.1	26.7%	34.7%
PCB-167	0.328	1.312	5	B	<5*B	5	2.5	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.323	1.292	9.14	B	<5*B	9.14	4.57	0.0005	0.0	0.0	1.1%	0.7%
PCB-157	0.334	1.336	2.67	B	<5*B	2.67	1.335	0.0005	0.0	0.0	0.3%	0.2%
PCB-169	0.0504	0.2016	0.239	--		0.239	0.239	0.01	0.0	0.0	0.6%	0.7%
PCB-189	0.16	0.64	1.19	--		1.19	1.19	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.3	0.2	0.1	0.1	0.4	0.3

Sample ID	521	Field		S23								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0539	0.2156		--	0.02695		0.1	0.0	0.0	0.0	0.6%	0.0%
2,3,7,8-TCDD	0.0178	0.0712		--	0.0089		1	0.0	0.0	0.0	1.9%	0.0%
1,2,3,7,8-PeCDF	0.144	0.576		E	0.072		0.05	0.0	0.0	0.0	0.8%	0.0%
2,3,4,7,8-PeCDF	0.012	0.048		--	0.006		0.5	0.0	0.0	0.0	0.7%	0.0%
1,2,3,7,8-PeCDD	0.0254	0.1016		--	0.0127		1	0.0	0.0	0.0	2.8%	0.0%
1,2,3,4,7,8-HxCDF	0.0318	0.1272	0.138	B	<5*B	0.138	0.069	0.1	0.0	0.0	3.0%	2.4%
1,2,3,6,7,8-HxCDF	0.0286	0.1144	0.265	--		0.265	0.265	0.1	0.0	0.0	5.8%	9.3%
2,3,4,6,7,8-HxCDF	0.033	0.132		--	<5*B	0.0165		0.1	0.0	0.0	0.4%	0.0%
1,2,3,7,8,9-HxCDF	0.04	0.16	0.378	B	<5*B	0.378	0.189	0.1	0.0	0.0	8.2%	6.6%
1,2,3,4,7,8-HxCDD	0.2	0.8		E		0.1		0.1	0.0	0.0	2.2%	0.0%
1,2,3,6,7,8-HxCDD	0.986	3.944		E		0.493		0.1	0.0	0.0	10.7%	0.0%
1,2,3,7,8,9-HxCDD	0.0107	0.0428	1.44	--		1.44	1.44	0.1	0.1	0.1	31.3%	50.4%
1,2,3,4,6,7,8-HpCDF	0.0317	0.1268	0.746	--		0.746	0.746	0.01	0.0	0.0	1.6%	2.6%
1,2,3,4,7,8,9-HpCDF	0.149	0.596		E		0.0745		0.01	0.0	0.0	0.2%	0.0%
1,2,3,4,6,7,8-HpCDD	0.0174	0.0696	2.36	--		2.36	2.36	0.01	0.0	0.0	5.1%	8.3%
OCDF	0.0143	0.0572	2.11	B	<5*B	2.11	1.055	0.0001	0.0	0.0	0.0%	0.0%
OCDD	0.0234	0.0936	16	--		16	16	0.0001	0.0	0.0	0.3%	0.6%
PCB-81	0.228	0.912	0.641	B	<5*B	0.641	0.16025	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.188	0.752	4.54	B	<5*B	4.54	2.27	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	0.323	1.292		--	<5*B	0.1615		0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.288	1.152	54.6	BJ	<5*B	54.6	27.3	0.0001	0.0	0.0	1.2%	1.0%
PCB-114	0.331	1.324	1.46	--		1.46	1.46	0.0005	0.0	0.0	0.2%	0.3%
PCB-105	0.333	1.332	23.8	B	<5*B	23.8	11.9	0.0001	0.0	0.0	0.5%	0.4%
PCB-126	0.134	0.536	0.986	B	<5*B	0.986	0.493	0.1	0.1	0.0	21.4%	17.2%
PCB-167	0.212	0.848	3.09	BJ	<5*B	3.09	1.545	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.218	0.872	6.06	B	<5*B	6.06	3.03	0.0005	0.0	0.0	0.7%	0.5%
PCB-157	1.98	7.92		E	<5*B	0.99		0.0005	0.0	0.0	0.1%	0.0%
PCB-169	0.053	0.212	0.186	--		0.186	0.093	0.01	0.0	0.0	0.4%	0.3%
PCB-189	0.0488	0.1952	0.861	--		0.861	0.861	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.3	0.2	0.1	0.1	0.5	0.3

Sample ID	547	Field	S26										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.0152	0.0608	0.184	NJ		0.092	0	0.1	0.0	0.0	0.9%	0.0%	
2,3,7,8-TCDD	0.00255	0.0102		--		0.001275		1	0.0	0.0	0.1%	0.0%	
1,2,3,7,8-PeCDF	0.0098	0.0392	1.17	--		1.17	1.17	0.05	0.1	0.1	5.5%	6.3%	
2,3,4,7,8-PeCDF	0.00738	0.0295	0.231	--		0.231	0.231	0.5	0.1	0.1	10.9%	12.4%	
1,2,3,7,8-PeCDD	0.00196	0.0078		--		0.00098		1	0.0	0.0	0.1%	0.0%	
1,2,3,4,7,8-HxCDF	0.0212	0.0848	1.62	--		1.62	1.62	0.1	0.2	0.2	15.2%	17.4%	
1,2,3,6,7,8-HxCDF	0.0182	0.0728	1.15	--		1.15	1.15	0.1	0.1	0.1	10.8%	12.4%	
2,3,4,6,7,8-HxCDF	0.0201	0.0804	0.493	B	<5*B	0.493	0.2465	0.1	0.0	0.0	4.6%	2.6%	
1,2,3,7,8,9-HxCDF	0.0224	0.0896	0.728	B	<5*B	0.728	0.364	0.1	0.1	0.0	6.8%	3.9%	
1,2,3,4,7,8-HxCDD	0.225	0.9		E		0.1125		0.1	0.0	0.0	1.1%	0.0%	
1,2,3,6,7,8-HxCDD	0.331	1.324		E		0.1655		0.1	0.0	0.0	1.6%	0.0%	
1,2,3,7,8,9-HxCDD	0.274	1.096		E		0.137		0.1	0.0	0.0	1.3%	0.0%	
1,2,3,4,6,7,8-HpCDF	0.0244	0.0976	4.42	--		4.42	4.42	0.01	0.0	0.0	4.2%	4.7%	
1,2,3,4,7,8,9-HpCDF	0.0295	0.118	2.15	--		2.15	2.15	0.01	0.0	0.0	2.0%	2.3%	
1,2,3,4,6,7,8-HpCDD	0.00354	0.0142	6.53	--		6.53	6.53	0.01	0.1	0.1	6.1%	7.0%	
OCDF	0.00593	0.0237	21	--		21	21	0.0001	0.0	0.0	0.2%	0.2%	
OCDD	0.00107	0.0043	51.4	--		51.4	51.4	0.0001	0.0	0.0	0.5%	0.6%	
PCB-81	0.0334	0.1336	0.6	B	<5*B	0.6	0.3	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.0321	0.1284	9.12	--	<5*B	9.12	9.12	0.0001	0.0	0.0	0.1%	0.1%	
PCB-123	0.176	0.704	1.63	B	<5*B	1.63	0.815	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.156	0.624	122	BJ	<5*B	122	61	0.0001	0.0	0.0	1.1%	0.7%	
PCB-114	0.171	0.684	3.03	--		3.03	3.03	0.0005	0.0	0.0	0.1%	0.2%	
PCB-105	0.172	0.688	58	B	<5*B	58	29	0.0001	0.0	0.0	0.5%	0.3%	
PCB-126	0.116	0.464	2.62	--		2.62	2.62	0.1	0.3	0.3	24.6%	28.1%	
PCB-167	0.155	0.62	9.08	BJ	<5*B	9.08	4.54	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.159	0.636	21.9	B	<5*B	21.9	10.95	0.0005	0.0	0.0	1.0%	0.6%	
PCB-157	0.168	0.672	5.79	B	<5*B	5.79	2.895	0.0005	0.0	0.0	0.3%	0.2%	
PCB-169	0.38	1.52		E		0.19		0.01	0.0	0.0	0.2%	0.0%	
PCB-189	0.0748	0.2992	2.51	--		2.51	2.51	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.8	0.7	0.3	0.3	1.1	0.9

Sample ID	564	Field	S33										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.0717	0.2868	0.193	NJ		0.0965	0	0.1	0.0	0.0	0.6%	0.0%	
2,3,7,8-TCDD	0.00328	0.0131		--		0.00164		1	0.0	0.0	0.1%	0.0%	
1,2,3,7,8-PeCDF	0.00136	0.0054	0.274	--		0.274	0.274	0.05	0.0	0.0	0.8%	1.0%	
2,3,4,7,8-PeCDF	0.00104	0.0042	0.376	--		0.376	0.376	0.5	0.2	0.2	11.6%	13.9%	
1,2,3,7,8-PeCDD	0.291	1.164		E		0.1455		1	0.1	0.0	9.0%	0.0%	
1,2,3,4,7,8-HxCDF	0.0664	0.2656	0.385	B	<5*B	0.385	0.1925	0.1	0.0	0.0	2.4%	1.4%	
1,2,3,6,7,8-HxCDF	0.307	1.228		E		0.1535		0.1	0.0	0.0	0.9%	0.0%	
2,3,4,6,7,8-HxCDF	0.0594	0.2376	0.477	B	<5*B	0.477	0.2385	0.1	0.0	0.0	3.0%	1.8%	
1,2,3,7,8,9-HxCDF	0.0669	0.2676	0.405	B	<5*B	0.405	0.2025	0.1	0.0	0.0	2.5%	1.5%	
1,2,3,4,7,8-HxCDD	0.303	1.212		E		0.1515		0.1	0.0	0.0	0.9%	0.0%	
1,2,3,6,7,8-HxCDD	0.00641	0.0256	0.546	--		0.546	0.546	0.1	0.1	0.1	3.4%	4.0%	
1,2,3,7,8,9-HxCDD	0.00665	0.0266	0.54	--		0.54	0.54	0.1	0.1	0.1	3.3%	4.0%	
1,2,3,4,6,7,8-HpCDF	0.0262	0.1048	3.5	--		3.5	3.5	0.01	0.0	0.0	2.2%	2.6%	
1,2,3,4,7,8,9-HpCDF	0.412	1.648		E		0.206		0.01	0.0	0.0	0.1%	0.0%	
1,2,3,4,6,7,8-HpCDD	0.0264	0.1056	14.2	--		14.2	14.2	0.01	0.1	0.1	8.8%	10.5%	
OCDF	0.00693	0.0277	8.94	--		8.94	8.94	0.0001	0.0	0.0	0.1%	0.1%	
OCDD	0.0134	0.0536	215	--		215	215	0.0001	0.0	0.0	1.3%	1.6%	
PCB-81	0.139	0.556	1.31	B	<5*B	1.31	0.655	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.126	0.504	25.2	--		25.2	25.2	0.0001	0.0	0.0	0.2%	0.2%	
PCB-123	0.369	1.476	4.21	B	<5*B	4.21	2.105	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.328	1.312	178	BJ	<5*B	178	89	0.0001	0.0	0.0	1.1%	0.7%	
PCB-114	0.373	1.492	3.94	--		3.94	3.94	0.0005	0.0	0.0	0.1%	0.1%	
PCB-105	0.376	1.504	98.8	B	<5*B	98.8	49.4	0.0001	0.0	0.0	0.6%	0.4%	
PCB-126	0.129	0.516	7.28	--		7.28	7.28	0.1	0.7	0.7	45.0%	53.9%	
PCB-167	0.258	1.032	15	J		15	7.5	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.265	1.06	35.2	--		35.2	35.2	0.0005	0.0	0.0	1.1%	1.3%	
PCB-157	0.28	1.12	9.18	--		9.18	9.18	0.0005	0.0	0.0	0.3%	0.3%	
PCB-169	0.0292	0.1168	0.747	--		0.747	0.747	0.01	0.0	0.0	0.5%	0.6%	
PCB-189	0.157	0.628	4.47	--		4.47	4.47	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.8	0.6	0.8	0.8	1.6	1.3

Sample ID	567	Field		S12								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.034	0.136	0.24	NJ		0.12	0	0.1	0.0	0.0	1.1%	0.0%
2,3,7,8-TCDD	0.0281	0.1124		--		0.01405		1	0.0	0.0	1.3%	0.0%
1,2,3,7,8-PeCDF	0.0835	0.334	0.59	--		0.59	0.59	0.05	0.0	0.0	2.8%	4.3%
2,3,4,7,8-PeCDF	0.242	0.968		E		0.121		0.5	0.1	0.0	5.7%	0.0%
1,2,3,7,8-PeCDD	0.328	1.312		E		0.164		1	0.2	0.0	15.5%	0.0%
1,2,3,4,7,8-HxCDF	0.0628	0.2512	0.881	--		0.881	0.881	0.1	0.1	0.1	8.3%	12.7%
1,2,3,6,7,8-HxCDF	0.0559	0.2236	0.58	B	<5*B	0.58	0.29	0.1	0.1	0.0	5.5%	4.2%
2,3,4,6,7,8-HxCDF	0.0609	0.2436	0.551	--		0.551	0.551	0.1	0.1	0.1	5.2%	8.0%
1,2,3,7,8,9-HxCDF	0.472	1.888		E		0.236		0.1	0.0	0.0	2.2%	0.0%
1,2,3,4,7,8-HxCDD	0.328	1.312		E		0.164		0.1	0.0	0.0	1.6%	0.0%
1,2,3,6,7,8-HxCDD	0.343	1.372		E		0.1715		0.1	0.0	0.0	1.6%	0.0%
1,2,3,7,8,9-HxCDD	0.00726	0.0290	0.348	J		0.348	0.174	0.1	0.0	0.0	3.3%	2.5%
1,2,3,4,6,7,8-HpCDF	0.0197	0.0788	3.48	--		3.48	3.48	0.01	0.0	0.0	3.3%	5.0%
1,2,3,4,7,8,9-HpCDF	0.0266	0.1064	1.04	--		1.04	1.04	0.01	0.0	0.0	1.0%	1.5%
1,2,3,4,6,7,8-HpCDD	0.0215	0.086	8.33	--		8.33	8.33	0.01	0.1	0.1	7.9%	12.1%
OCDF	0.0113	0.0452	17	--		17	17	0.0001	0.0	0.0	0.2%	0.2%
OCDD	0.0239	0.0956	70.1	--		70.1	70.1	0.0001	0.0	0.0	0.7%	1.0%
PCB-81	0.0521	0.2084	0.764	B	<5*B	0.764	0.382	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0422	0.1688	13.7	--		13.7	13.7	0.0001	0.0	0.0	0.1%	0.2%
PCB-123	0.886	3.544		--	<5*B	0.443		0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.78	3.12	96.3	BJ	<5*B	96.3	48.15	0.0001	0.0	0.0	0.9%	0.7%
PCB-114	0.767	3.068	2.27	B	<5*B	2.27	0.5675	0.0005	0.0	0.0	0.1%	0.0%
PCB-105	0.734	2.936	49.1	B	<5*B	49.1	24.55	0.0001	0.0	0.0	0.5%	0.4%
PCB-126	0.0824	0.3296	3.14	--		3.14	3.14	0.1	0.3	0.3	29.7%	45.4%
PCB-167	0.335	1.34	11	--		11	11	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.329	1.316	20.4	--		20.4	20.4	0.0005	0.0	0.0	1.0%	1.5%
PCB-157	0.34	1.36	5	B	<5*B	5	2.5	0.0005	0.0	0.0	0.2%	0.2%
PCB-169	0.402	1.608		E		0.201		0.01	0.0	0.0	0.2%	0.0%
PCB-189	0.312	1.248	4.11	--		4.11	4.11	0.0001	0.0	0.0	0.0%	0.1%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.7	0.4	0.3	0.3	1.1	0.7

Sample ID	589	Field		S8									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.0543	0.2172	--		0.02715		0.1	0.0	0.0	0.0	0.7%	0.0%	
2,3,7,8-TCDD	0.0284	0.1136	--		0.0142		1	0.0	0.0	0.0	3.9%	0.0%	
1,2,3,7,8-PeCDF	0.0981	0.3924	--		0.04905		0.05	0.0	0.0	0.0	0.7%	0.0%	
2,3,4,7,8-PeCDF	0.0692	0.2768	--		0.0346		0.5	0.0	0.0	0.0	4.8%	0.0%	
1,2,3,7,8-PeCDD	0.0593	0.2372	--		0.02965		1	0.0	0.0	0.0	8.2%	0.0%	
1,2,3,4,7,8-HxCDF	0.023	0.092	0.266	--	0.266	0.266	0.1	0.0	0.0	0.0	7.3%	10.8%	
1,2,3,6,7,8-HxCDF	0.0204	0.0816	0.206	B	<5*B	0.206	0.103	0.1	0.0	0.0	5.7%	4.2%	
2,3,4,6,7,8-HxCDF	0.0242	0.0968	--		0.0121		0.1	0.0	0.0	0.0	0.3%	0.0%	
1,2,3,7,8,9-HxCDF	0.0296	0.1184	0.391	--	0.391	0.391	0.1	0.0	0.0	0.0	10.8%	15.8%	
1,2,3,4,7,8-HxCDD	0.205	0.82	E		0.1025		0.1	0.0	0.0	0.0	2.8%	0.0%	
1,2,3,6,7,8-HxCDD	0.0441	0.1764	0.279	--	0.279	0.279	0.1	0.0	0.0	0.0	7.7%	11.3%	
1,2,3,7,8,9-HxCDD	0.237	0.948	EJ		0.1185		0.1	0.0	0.0	0.0	3.3%	0.0%	
1,2,3,4,6,7,8-HpCDF	0.0208	0.0832	1.29	B	<5*B	1.29	0.645	0.01	0.0	0.0	3.6%	2.6%	
1,2,3,4,7,8,9-HpCDF	0.362	1.448	E		0.181		0.01	0.0	0.0	0.0	0.5%	0.0%	
1,2,3,4,6,7,8-HpCDD	0.0141	0.0564	4.28	--	4.28	4.28	0.01	0.0	0.0	0.0	11.8%	17.3%	
OCDF	0.0607	0.2428	4.85	--	4.85	4.85	0.0001	0.0	0.0	0.0	0.1%	0.2%	
OCDD	0.046	0.184	36.1	--	36.1	36.1	0.0001	0.0	0.0	0.0	1.0%	1.5%	
PCB-81	0.0904	0.3616	0.718	B	<5*B	0.718	0.359	0.0001	0.0	0.0	0.0	0.0%	0.0%
PCB-77	0.0602	0.2408	2.94	B	<5*B	2.94	1.47	0.0001	0.0	0.0	0.1%	0.1%	
PCB-123	1.24	4.96	E	<5*B	0.62		0.0001	0.0	0.0	0.0	0.0%	0.0%	
PCB-118	0.57	2.28	48.5	BJ	<5*B	48.5	24.25	0.0001	0.0	0.0	1.3%	1.0%	
PCB-114	0.527	2.108	1.48	B	<5*B	1.48	0.37	0.0005	0.0	0.0	0.2%	0.1%	
PCB-105	0.504	2.016	19.9	B	<5*B	19.9	9.95	0.0001	0.0	0.0	0.5%	0.4%	
PCB-126	0.184	0.736	0.845	--	0.845	0.845	0.1	0.1	0.1	0.1	23.3%	34.2%	
PCB-167	0.209	0.836	3.8	B	<5*B	3.8	1.9	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.205	0.82	7.12	B	<5*B	7.12	3.56	0.0005	0.0	0.0	1.0%	0.7%	
PCB-157	1.96	7.84	E	<5*B	0.98		0.0005	0.0	0.0	0.0	0.1%	0.0%	
PCB-169	0.109	0.436	--		0.0545		0.01	0.0	0.0	0.0	0.2%	0.0%	
PCB-189	0.143	0.572	1.05	--	1.05	1.05	0.0001	0.0	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.3	0.2	0.1	0.1	0.4	0.2

Sample ID	616	Field		S31								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0726	0.2904	0.502	NJ		0.251	0	0.1	0.0	0.0	1.1%	0.0%
2,3,7,8-TCDD	0.00242	0.0097		--		0.00121		1	0.0	0.0	0.1%	0.0%
1,2,3,7,8-PeCDF	0.021	0.084	3.29	--		3.29	3.29	0.05	0.2	0.2	7.0%	8.1%
2,3,4,7,8-PeCDF	0.492	1.968		E		0.246		0.5	0.1	0.0	5.2%	0.0%
1,2,3,7,8-PeCDD	0.217	0.868		E		0.1085		1	0.1	0.0	4.6%	0.0%
1,2,3,4,7,8-HxCDF	0.0439	0.1756	5.02	--		5.02	5.02	0.1	0.5	0.5	21.4%	24.7%
1,2,3,6,7,8-HxCDF	0.0396	0.1584	2.91	--		2.91	2.91	0.1	0.3	0.3	12.4%	14.3%
2,3,4,6,7,8-HxCDF	0.0486	0.1944	1.64	--		1.64	1.64	0.1	0.2	0.2	7.0%	8.1%
1,2,3,7,8,9-HxCDF	0.0587	0.2348	1.51	--		1.51	1.51	0.1	0.2	0.2	6.4%	7.4%
1,2,3,4,7,8-HxCDD	0.411	1.644		E		0.2055		0.1	0.0	0.0	0.9%	0.0%
1,2,3,6,7,8-HxCDD	0.0137	0.0548	0.44	--		0.44	0.44	0.1	0.0	0.0	1.9%	2.2%
1,2,3,7,8,9-HxCDD	0.0151	0.0604	0.387	J		0.387	0.1935	0.1	0.0	0.0	1.7%	1.0%
1,2,3,4,6,7,8-HpCDF	0.0336	0.1344	16.6	--		16.6	16.6	0.01	0.2	0.2	7.1%	8.2%
1,2,3,4,7,8,9-HpCDF	0.0486	0.1944	6.15	--		6.15	6.15	0.01	0.1	0.1	2.6%	3.0%
1,2,3,4,6,7,8-HpCDD	0.02	0.08	7.73	--		7.73	7.73	0.01	0.1	0.1	3.3%	3.8%
OCDF	0.0138	0.0552	91.2	--		91.2	91.2	0.0001	0.0	0.0	0.4%	0.4%
OCDD	0.0229	0.0916	51.7	--		51.7	51.7	0.0001	0.0	0.0	0.2%	0.3%
PCB-81	0.0211	0.0844	0.851	B	<5*B	0.851	0.4255	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0175	0.07	14.2	--		14.2	14.2	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	0.92	3.68	6.83	--		6.83	6.83	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.809	3.236	352	J		352	176	0.0001	0.0	0.0	1.5%	0.9%
PCB-114	0.79	3.16	7.54	--		7.54	7.54	0.0005	0.0	0.0	0.2%	0.2%
PCB-105	0.756	3.024	159	--		159	159	0.0001	0.0	0.0	0.7%	0.8%
PCB-126	0.122	0.488	3.02	--		3.02	3.02	0.1	0.3	0.3	12.9%	14.9%
PCB-167	0.32	1.28	19.1	--		19.1	19.1	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.315	1.26	43.9	--		43.9	43.9	0.0005	0.0	0.0	0.9%	1.1%
PCB-157	0.326	1.304	11.6	--		11.6	11.6	0.0005	0.0	0.0	0.2%	0.3%
PCB-169	0.0376	0.1504	0.435	--		0.435	0.435	0.01	0.0	0.0	0.2%	0.2%
PCB-189	0.185	0.74	3.44	--		3.44	3.44	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
2.0	1.7	0.4	0.4	2.3	2.0

Sample ID	641	Field		S3								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.094	0.376	--			0.047		0.1	0.0	0.0	0.5%	0.0%
2,3,7,8-TCDD	0.00649	0.026	--			0.003245		1	0.0	0.0	0.3%	0.0%
1,2,3,7,8-PeCDF	0.0224	0.0896	0.65	--		0.65	0.65	0.05	0.0	0.0	3.2%	3.5%
2,3,4,7,8-PeCDF	0.0176	0.0704	0.355	--		0.355	0.355	0.5	0.2	0.2	17.7%	19.1%
1,2,3,7,8-PeCDD	0.00863	0.0345	--			0.004315		1	0.0	0.0	0.4%	0.0%
1,2,3,4,7,8-HxCDF	0.0822	0.3288	0.972	--		0.972	0.972	0.1	0.1	0.1	9.7%	10.4%
1,2,3,6,7,8-HxCDF	0.0763	0.3052	0.603	I		0.603	0.603	0.1	0.1	0.1	6.0%	6.5%
2,3,4,6,7,8-HxCDF	0.14	0.56	--	<5*B		0.07		0.1	0.0	0.0	0.7%	0.0%
1,2,3,7,8,9-HxCDF	0.233	0.932	0.502	B	<5*B	0.502	0.1255	0.1	0.1	0.0	5.0%	1.3%
1,2,3,4,7,8-HxCDD	0.0319	0.1276	0.324	--		0.324	0.324	0.1	0.0	0.0	3.2%	3.5%
1,2,3,6,7,8-HxCDD	0.035	0.14	0.328	--		0.328	0.328	0.1	0.0	0.0	3.3%	3.5%
1,2,3,7,8,9-HxCDD	0.0349	0.1396	--			0.01745		0.1	0.0	0.0	0.2%	0.0%
1,2,3,4,6,7,8-HpCDF	0.0489	0.1956	4.48	--		4.48	4.48	0.01	0.0	0.0	4.5%	4.8%
1,2,3,4,7,8,9-HpCDF	0.0939	0.3756	1.76	--		1.76	1.76	0.01	0.0	0.0	1.8%	1.9%
1,2,3,4,6,7,8-HpCDD	0.119	0.476	8.09	--		8.09	8.09	0.01	0.1	0.1	8.0%	8.7%
OCDF	0.0481	0.1924	26.4	--		26.4	26.4	0.0001	0.0	0.0	0.3%	0.3%
OCDD	0.0923	0.3692	63.4	--		63.4	63.4	0.0001	0.0	0.0	0.6%	0.7%
PCB-81	0.353	1.412	0.983	B	<5*B	0.983	0.24575	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.333	1.332	13.3	B	<5*B	13.3	6.65	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	0.473	1.892	4.82	B	<5*B	4.82	2.41	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.42	1.68	115	BJ	<5*B	115	57.5	0.0001	0.0	0.0	1.1%	0.6%
PCB-114	0.493	1.972	2.42	--		2.42	2.42	0.0005	0.0	0.0	0.1%	0.1%
PCB-105	0.497	1.988	59.3	B	<5*B	59.3	29.65	0.0001	0.0	0.0	0.6%	0.3%
PCB-126	0.0819	0.3276	3.11	--		3.11	3.11	0.1	0.3	0.3	30.9%	33.4%
PCB-167	0.163	0.652	8.05	BJ	<5*B	8.05	4.025	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.168	0.672	21.1	B	<5*B	21.1	10.55	0.0005	0.0	0.0	1.0%	0.6%
PCB-157	0.177	0.708	5.48	B	<5*B	5.48	2.74	0.0005	0.0	0.0	0.3%	0.1%
PCB-169	0.0289	0.1156	0.391	--		0.391	0.391	0.01	0.0	0.0	0.4%	0.4%
PCB-189	0.139	0.556	2.12	--		2.12	2.12	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.7	0.6	0.3	0.3	1.0	0.9

Sample ID	644	Field	S22										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.04	0.16	0.202	NJ		0.101	0	0.1	0.0	0.0	0.9%	0.0%	
2,3,7,8-TCDD	0.00136	0.0054		--	0.00068			1	0.0	0.0	0.1%	0.0%	
1,2,3,7,8-PeCDF	0.249	0.996		E		0.1245		0.05	0.0	0.0	0.6%	0.0%	
2,3,4,7,8-PeCDF	0.0126	0.0504	0.327	--		0.327	0.327	0.5	0.2	0.2	15.2%	20.3%	
1,2,3,7,8-PeCDD	0.276	1.104		E		0.138		1	0.1	0.0	12.9%	0.0%	
1,2,3,4,7,8-HxCDF	0.0258	0.1032	0.4	B	<5*B	0.4	0.2	0.1	0.0	0.0	3.7%	2.5%	
1,2,3,6,7,8-HxCDF	0.0216	0.0864	0.411	--		0.411	0.411	0.1	0.0	0.0	3.8%	5.1%	
2,3,4,6,7,8-HxCDF	0.0246	0.0984	0.306	B	<5*B	0.306	0.153	0.1	0.0	0.0	2.9%	1.9%	
1,2,3,7,8,9-HxCDF	0.391	1.564		E	<5*B	0.1955		0.1	0.0	0.0	1.8%	0.0%	
1,2,3,4,7,8-HxCDD	0.011	0.044	0.283	--		0.283	0.283	0.1	0.0	0.0	2.6%	3.5%	
1,2,3,6,7,8-HxCDD	0.768	3.072		E		0.384		0.1	0.0	0.0	3.6%	0.0%	
1,2,3,7,8,9-HxCDD	0.0109	0.0436	1.02	--		1.02	1.02	0.1	0.1	0.1	9.5%	12.6%	
1,2,3,4,6,7,8-HpCDF	0.0482	0.1928	2.29	--		2.29	2.29	0.01	0.0	0.0	2.1%	2.8%	
1,2,3,4,7,8,9-HpCDF	0.377	1.508		E		0.1885		0.01	0.0	0.0	0.2%	0.0%	
1,2,3,4,6,7,8-HpCDD	0.0164	0.0656	8.12	--		8.12	8.12	0.01	0.1	0.1	7.6%	10.1%	
OCDF	0.0102	0.0408	6.28	--		6.28	6.28	0.0001	0.0	0.0	0.1%	0.1%	
OCDD	0.00731	0.0292	61.2	--		61.2	61.2	0.0001	0.0	0.0	0.6%	0.8%	
PCB-81	0.213	0.852	0.859	B	<5*B	0.859	0.4295	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.192	0.768	12.9	B	<5*B	12.9	6.45	0.0001	0.0	0.0	0.1%	0.1%	
PCB-123	0.732	2.928	2.83	B	<5*B	2.83	0.7075	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.651	2.604	123	BJ	<5*B	123	61.5	0.0001	0.0	0.0	1.1%	0.8%	
PCB-114	0.648	2.592	2.41	--		2.41	1.205	0.0005	0.0	0.0	0.1%	0.1%	
PCB-105	0.652	2.608	52.8	B	<5*B	52.8	26.4	0.0001	0.0	0.0	0.5%	0.3%	
PCB-126	0.15	0.6	3.05	--		3.05	3.05	0.1	0.3	0.3	28.4%	37.8%	
PCB-167	0.0641	0.2564	9.9	J		9.9	4.95	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.066	0.264	18.4	B	<5*B	18.4	9.2	0.0005	0.0	0.0	0.9%	0.6%	
PCB-157	0.0696	0.2784	5.3	B	<5*B	5.3	2.65	0.0005	0.0	0.0	0.2%	0.2%	
PCB-169	0.0449	0.1796	0.409	--		0.409	0.409	0.01	0.0	0.0	0.4%	0.5%	
PCB-189	0.00751	0.0300	2.18	--		2.18	2.18	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.7	0.5	0.3	0.3	1.1	0.8

Sample ID	693	Field	S34										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.132	0.528	0.232	NJ		0.116	0	0.1	0.0	0.0	0.7%	0.0%	
2,3,7,8-TCDD	0.00204	0.0082		--		0.00102		1	0.0	0.0	0.1%	0.0%	
1,2,3,7,8-PeCDF	0.271	1.084		E		0.1355		0.05	0.0	0.0	0.4%	0.0%	
2,3,4,7,8-PeCDF	0.00547	0.0219	0.308	--		0.308	0.308	0.5	0.2	0.2	9.2%	9.9%	
1,2,3,7,8-PeCDD	0.002	0.008	0.325	--		0.325	0.325	1	0.3	0.3	19.5%	20.8%	
1,2,3,4,7,8-HxCDF	0.56	2.24		E	<5*B	0.28		0.1	0.0	0.0	1.7%	0.0%	
1,2,3,6,7,8-HxCDF	0.0188	0.0752	0.328	--		0.328	0.328	0.1	0.0	0.0	2.0%	2.1%	
2,3,4,6,7,8-HxCDF	0.0217	0.0868	0.426	B	<5*B	0.426	0.213	0.1	0.0	0.0	2.6%	1.4%	
1,2,3,7,8,9-HxCDF	0.0247	0.0988	0.347	B	<5*B	0.347	0.1735	0.1	0.0	0.0	2.1%	1.1%	
1,2,3,4,7,8-HxCDD	0.0231	0.0924	0.354	--		0.354	0.354	0.1	0.0	0.0	2.1%	2.3%	
1,2,3,6,7,8-HxCDD	0.0223	0.0892	0.541	--		0.541	0.541	0.1	0.1	0.1	3.2%	3.5%	
1,2,3,7,8,9-HxCDD	0.0236	0.0944	0.449	--		0.449	0.449	0.1	0.0	0.0	2.7%	2.9%	
1,2,3,4,6,7,8-HpCDF	0.0419	0.1676	3.48	--		3.48	3.48	0.01	0.0	0.0	2.1%	2.2%	
1,2,3,4,7,8,9-HpCDF	0.511	2.044		E		0.2555		0.01	0.0	0.0	0.2%	0.0%	
1,2,3,4,6,7,8-HpCDD	0.0214	0.0856	12.6	--		12.6	12.6	0.01	0.1	0.1	7.6%	8.1%	
OCDF	0.0227	0.0908	8.72	--		8.72	8.72	0.0001	0.0	0.0	0.1%	0.1%	
OCDD	0.018	0.072	103	--		103	103	0.0001	0.0	0.0	0.6%	0.7%	
PCB-81	6.58	26.32		--	<5*B	3.29		0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	6.18	24.72	20.9	--		20.9	10.45	0.0001	0.0	0.0	0.1%	0.1%	
PCB-123	1.96	7.84	5.15	B	<5*B	5.15	1.2875	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	1.74	6.96	169	BJ	<5*B	169	84.5	0.0001	0.0	0.0	1.0%	0.5%	
PCB-114	2.07	8.28	3.81	--		3.81	1.905	0.0005	0.0	0.0	0.1%	0.1%	
PCB-105	2.08	8.32	81.9	B	<5*B	81.9	40.95	0.0001	0.0	0.0	0.5%	0.3%	
PCB-126	0.111	0.444	6.62	--		6.62	6.62	0.1	0.7	0.7	39.7%	42.3%	
PCB-167	0.221	0.884	16.9	J		16.9	8.45	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.228	0.912	33.3	--		33.3	33.3	0.0005	0.0	0.0	1.0%	1.1%	
PCB-157	0.24	0.96	9.53	--		9.53	9.53	0.0005	0.0	0.0	0.3%	0.3%	
PCB-169	0.034	0.136	0.783	--		0.783	0.783	0.01	0.0	0.0	0.5%	0.5%	
PCB-189	0.0743	0.2972	4.35	--		4.35	4.35	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.9	0.9	0.7	0.7	1.7	1.6

Sample ID	736	Field		S30								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.175	0.7		E		0.0875		0.1	0.0	0.0	1.3%	0.0%
2,3,7,8-TCDD	0.00344	0.0138		--		0.00172		1	0.0	0.0	0.3%	0.0%
1,2,3,7,8-PeCDF	0.0552	0.2208	0.335	--		0.335	0.335	0.05	0.0	0.0	2.5%	4.4%
2,3,4,7,8-PeCDF	0.0365	0.146	0.185	--		0.185	0.185	0.5	0.1	0.1	13.7%	24.1%
1,2,3,7,8-PeCDD	0.364	1.456		E		0.182		1	0.2	0.0	27.0%	0.0%
1,2,3,4,7,8-HxCDF	0.436	1.744		E		0.218		0.1	0.0	0.0	3.2%	0.0%
1,2,3,6,7,8-HxCDF	0.0231	0.0924	0.311	B	<5*B	0.311	0.1555	0.1	0.0	0.0	4.6%	4.0%
2,3,4,6,7,8-HxCDF	0.263	1.052		E		0.1315		0.1	0.0	0.0	2.0%	0.0%
1,2,3,7,8,9-HxCDF	0.0552	0.2208	0.495	--		0.495	0.495	0.1	0.0	0.0	7.4%	12.9%
1,2,3,4,7,8-HxCDD	0.0232	0.0928	0.171	--		0.171	0.171	0.1	0.0	0.0	2.5%	4.5%
1,2,3,6,7,8-HxCDD	0.322	1.288		E		0.161		0.1	0.0	0.0	2.4%	0.0%
1,2,3,7,8,9-HxCDD	0.215	0.86		EJ		0.1075		0.1	0.0	0.0	1.6%	0.0%
1,2,3,4,6,7,8-HpCDF	0.0249	0.0996	1.85	B	<5*B	1.85	0.925	0.01	0.0	0.0	2.7%	2.4%
1,2,3,4,7,8,9-HpCDF	0.543	2.172		E		0.2715		0.01	0.0	0.0	0.4%	0.0%
1,2,3,4,6,7,8-HpCDD	0.0242	0.0968	3.81	--		3.81	3.81	0.01	0.0	0.0	5.7%	9.9%
OCDF	0.0287	0.1148	6.58	--		6.58	6.58	0.0001	0.0	0.0	0.1%	0.2%
OCDD	0.0317	0.1268	25.5	--		25.5	25.5	0.0001	0.0	0.0	0.4%	0.7%
PCB-81	0.0692	0.2768	0.612	B	<5*B	0.612	0.306	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0664	0.2656	6.17	B	<5*B	6.17	3.085	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	0.898	3.592	1.4	B	<5*B	1.4	0.35	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.79	3.16	51.4	BJ	<5*B	51.4	25.7	0.0001	0.0	0.0	0.8%	0.7%
PCB-114	0.676	2.704	1.26	B	<5*B	1.26	0.315	0.0005	0.0	0.0	0.1%	0.0%
PCB-105	0.647	2.588	21	B	<5*B	21	10.5	0.0001	0.0	0.0	0.3%	0.3%
PCB-126	0.097	0.388	1.33	--		1.33	1.33	0.1	0.1	0.1	19.8%	34.6%
PCB-167	0.283	1.132	4.53	B	<5*B	4.53	2.265	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.278	1.112	7.54	B	<5*B	7.54	3.77	0.0005	0.0	0.0	0.6%	0.5%
PCB-157	0.288	1.152	2.31	B	<5*B	2.31	1.155	0.0005	0.0	0.0	0.2%	0.2%
PCB-169	0.0244	0.0976	0.247	--		0.247	0.247	0.01	0.0	0.0	0.4%	0.6%
PCB-189	0.143	0.572	1.25	--		1.25	1.25	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.5	0.2	0.1	0.1	0.7	0.4

Sample ID	768	Field	S27									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0597	0.2388		--		0.02985		0.1	0.0	0.0	0.7%	0.0%
2,3,7,8-TCDD	0.00158	0.0063		--		0.00079		1	0.0	0.0	0.2%	0.0%
1,2,3,7,8-PeCDF	0.00904	0.0362		--		0.00452		0.05	0.0	0.0	0.1%	0.0%
2,3,4,7,8-PeCDF	0.0068	0.0272		--		0.0034		0.5	0.0	0.0	0.4%	0.0%
1,2,3,7,8-PeCDD	0.00284	0.0114		--		0.00142		1	0.0	0.0	0.3%	0.0%
1,2,3,4,7,8-HxCDF	0.0188	0.0752	0.141	B	<5*B	0.141	0.0705	0.1	0.0	0.0	3.3%	1.8%
1,2,3,6,7,8-HxCDF	0.0166	0.0664	0.173	--		0.173	0.173	0.1	0.0	0.0	4.0%	4.5%
2,3,4,6,7,8-HxCDF	0.168	0.672		E	<5*B	0.084		0.1	0.0	0.0	1.9%	0.0%
1,2,3,7,8,9-HxCDF	0.0211	0.0844	0.286	B	<5*B	0.286	0.143	0.1	0.0	0.0	6.6%	3.7%
1,2,3,4,7,8-HxCDD	0.00085	0.0034	0.184	--		0.184	0.184	0.1	0.0	0.0	4.3%	4.8%
1,2,3,6,7,8-HxCDD	0.00088	0.0035	0.281	--		0.281	0.281	0.1	0.0	0.0	6.5%	7.3%
1,2,3,7,8,9-HxCDD	0.0009	0.0036	0.275	--		0.275	0.275	0.1	0.0	0.0	6.4%	7.1%
1,2,3,4,6,7,8-HpCDF	0.0203	0.0812	1.13	--		1.13	1.13	0.01	0.0	0.0	2.6%	2.9%
1,2,3,4,7,8,9-HpCDF	0.022	0.088	0.186	--		0.186	0.186	0.01	0.0	0.0	0.4%	0.5%
1,2,3,4,6,7,8-HpCDD	0.00617	0.0247	4.59	--		4.59	4.59	0.01	0.0	0.0	10.6%	11.9%
OCDF	0.00997	0.0399	2.81	--		2.81	2.81	0.0001	0.0	0.0	0.1%	0.1%
OCDD	0.00121	0.0048	33.9	--		33.9	33.9	0.0001	0.0	0.0	0.8%	0.9%
PCB-81	2.65	10.6		--	<5*B	1.325		0.0001	0.0	0.0	0.0%	0.0%
PCB-77	2.59	10.36	7.24	B	<5*B	7.24	1.81	0.0001	0.0	0.0	0.2%	0.0%
PCB-123	0.215	0.86		--	<5*B	0.1075		0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.191	0.764	46.5	BJ	<5*B	46.5	23.25	0.0001	0.0	0.0	1.1%	0.6%
PCB-114	0.213	0.852	1.22	--		1.22	1.22	0.0005	0.0	0.0	0.1%	0.2%
PCB-105	0.214	0.856	23.6	B	<5*B	23.6	11.8	0.0001	0.0	0.0	0.5%	0.3%
PCB-126	0.0782	0.3128	2.02	--		2.02	2.02	0.1	0.2	0.2	46.8%	52.4%
PCB-167	0.161	0.644	3.77	BJ	<5*B	3.77	1.885	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.165	0.66	11.2	B	<5*B	11.2	5.6	0.0005	0.0	0.0	1.3%	0.7%
PCB-157	0.174	0.696	2.75	B	<5*B	2.75	1.375	0.0005	0.0	0.0	0.3%	0.2%
PCB-169	0.293	1.172		E		0.1465		0.01	0.0	0.0	0.3%	0.0%
PCB-189	0.072	0.288	1.3	--		1.3	1.3	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.2	0.2	0.2	0.2	0.4	0.4

Sample ID	788	Field		S7								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.223	0.892		E		0.1115		0.1	0.0	0.0	0.8%	0.0%
2,3,7,8-TCDD	0.0115	0.046		--		0.00575		1	0.0	0.0	0.4%	0.0%
1,2,3,7,8-PeCDF	0.0375	0.15	0.553	--		0.553	0.553	0.05	0.0	0.0	2.0%	2.1%
2,3,4,7,8-PeCDF	0.029	0.116	0.298	--		0.298	0.298	0.5	0.1	0.1	10.8%	11.4%
1,2,3,7,8-PeCDD	0.0202	0.0808	0.308	--		0.308	0.308	1	0.3	0.3	22.3%	23.5%
1,2,3,4,7,8-HxCDF	0.0191	0.0764	0.687	--		0.687	0.687	0.1	0.1	0.1	5.0%	5.2%
1,2,3,6,7,8-HxCDF	0.0172	0.0688	0.473	B		0.473	0.2365	0.1	0.0	0.0	3.4%	1.8%
2,3,4,6,7,8-HxCDF	0.0184	0.0736	0.429	--		0.429	0.429	0.1	0.0	0.0	3.1%	3.3%
1,2,3,7,8,9-HxCDF	0.0188	0.0752	0.481	--		0.481	0.481	0.1	0.0	0.0	3.5%	3.7%
1,2,3,4,7,8-HxCDD	0.0195	0.078	0.267	--		0.267	0.267	0.1	0.0	0.0	1.9%	2.0%
1,2,3,6,7,8-HxCDD	0.0147	0.0588	0.473	--		0.473	0.473	0.1	0.0	0.0	3.4%	3.6%
1,2,3,7,8,9-HxCDD	0.395	1.58		EJ		0.1975		0.1	0.0	0.0	1.4%	0.0%
1,2,3,4,6,7,8-HpCDF	0.0233	0.0932	3.6	--		3.6	3.6	0.01	0.0	0.0	2.6%	2.7%
1,2,3,4,7,8,9-HpCDF	0.0312	0.1248	0.929	--		0.929	0.929	0.01	0.0	0.0	0.7%	0.7%
1,2,3,4,6,7,8-HpCDD	0.0225	0.09	11.3	--		11.3	11.3	0.01	0.1	0.1	8.2%	8.6%
OCDF	0.0116	0.0464	33.8	--		33.8	33.8	0.0001	0.0	0.0	0.2%	0.3%
OCDD	0.0181	0.0724	96.2	--		96.2	96.2	0.0001	0.0	0.0	0.7%	0.7%
PCB-81	0.0425	0.17	0.802	B		0.802	0.401	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0334	0.1336	9.92	B		9.92	4.96	0.0001	0.0	0.0	0.1%	0.0%
PCB-123	0.355	1.42	4.5	--		4.5	4.5	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.313	1.252	139	J		139	69.5	0.0001	0.0	0.0	1.0%	0.5%
PCB-114	0.242	0.968	3.2	B		3.2	1.6	0.0005	0.0	0.0	0.1%	0.1%
PCB-105	0.231	0.924	59.4	--		59.4	59.4	0.0001	0.0	0.0	0.4%	0.5%
PCB-126	0.0536	0.2144	3.69	--		3.69	3.69	0.1	0.4	0.4	26.7%	28.1%
PCB-167	0.0939	0.3756	12.7	--		12.7	12.7	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.0923	0.3692	23.5	--		23.5	23.5	0.0005	0.0	0.0	0.8%	0.9%
PCB-157	0.0954	0.3816	6.24	--		6.24	6.24	0.0005	0.0	0.0	0.2%	0.2%
PCB-169	0.422	1.688		E		0.211		0.01	0.0	0.0	0.2%	0.0%
PCB-189	0.132	0.528	3.01	--		3.01	3.01	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.0	0.9	0.4	0.4	1.4	1.3

Sample ID	830	Field	S6									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0358	0.1432	0.366	NJ		0.183	0	0.1	0.0	0.0	1.0%	0.0%
2,3,7,8-TCDD	0.0253	0.1012		--		0.01265		1	0.0	0.0	0.7%	0.0%
1,2,3,7,8-PeCDF	0.0326	0.1304	1.87	--		1.87	1.87	0.05	0.1	0.1	5.0%	6.3%
2,3,4,7,8-PeCDF	0.0225	0.09	0.403	--		0.403	0.403	0.5	0.2	0.2	10.8%	13.5%
1,2,3,7,8-PeCDD	0.361	1.444		E		0.1805		1	0.2	0.0	9.7%	0.0%
1,2,3,4,7,8-HxCDF	0.0522	0.2088	3.19	--		3.19	3.19	0.1	0.3	0.3	17.1%	21.4%
1,2,3,6,7,8-HxCDF	0.0446	0.1784	1.98	B	<5*B	1.98	0.99	0.1	0.2	0.1	10.6%	6.6%
2,3,4,6,7,8-HxCDF	0.0507	0.2028	0.864	--		0.864	0.864	0.1	0.1	0.1	4.6%	5.8%
1,2,3,7,8,9-HxCDF	0.0618	0.2472	1.14	--		1.14	1.14	0.1	0.1	0.1	6.1%	7.6%
1,2,3,4,7,8-HxCDD	0.00298	0.0119	0.262	--		0.262	0.262	0.1	0.0	0.0	1.4%	1.8%
1,2,3,6,7,8-HxCDD	0.00218	0.0087	0.742	--		0.742	0.742	0.1	0.1	0.1	4.0%	5.0%
1,2,3,7,8,9-HxCDD	0.0026	0.0104	1	J		1	0.5	0.1	0.1	0.1	5.4%	3.3%
1,2,3,4,6,7,8-HpCDF	0.0396	0.1584	9.32	--		9.32	9.32	0.01	0.1	0.1	5.0%	6.2%
1,2,3,4,7,8,9-HpCDF	0.0432	0.1728	3.85	--		3.85	3.85	0.01	0.0	0.0	2.1%	2.6%
1,2,3,4,6,7,8-HpCDD	0.0227	0.0908	6.4	--		6.4	6.4	0.01	0.1	0.1	3.4%	4.3%
OCDF	0.031	0.124	56.1	--		56.1	56.1	0.0001	0.0	0.0	0.3%	0.4%
OCDD	0.0293	0.1172	47.2	--		47.2	47.2	0.0001	0.0	0.0	0.3%	0.3%
PCB-81	0.0905	0.362	0.869	B	<5*B	0.869	0.4345	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0723	0.2892	12.2	B	<5*B	12.2	6.1	0.0001	0.0	0.0	0.1%	0.0%
PCB-123	0.228	0.912		--	<5*B	0.114		0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.201	0.804	72.3	BJ	<5*B	72.3	36.15	0.0001	0.0	0.0	0.4%	0.2%
PCB-114	0.193	0.772	2.03	B	<5*B	2.03	1.015	0.0005	0.0	0.0	0.1%	0.0%
PCB-105	0.184	0.736	47.2	B	<5*B	47.2	23.6	0.0001	0.0	0.0	0.3%	0.2%
PCB-126	0.158	0.632	2.11	--		2.11	2.11	0.1	0.2	0.2	11.3%	14.1%
PCB-167	0.192	0.768	7.34	B	<5*B	7.34	3.67	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.189	0.756	13.8	B	<5*B	13.8	6.9	0.0005	0.0	0.0	0.4%	0.2%
PCB-157	0.196	0.784	4.3	B	<5*B	4.3	2.15	0.0005	0.0	0.0	0.1%	0.1%
PCB-169	0.403	1.612		E		0.2015		0.01	0.0	0.0	0.1%	0.0%
PCB-189	0.189	0.756	2.46	--		2.46	2.46	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.6	1.3	0.2	0.2	1.9	1.5

Sample ID	847	Field	S25										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.0169	0.0676	0.384	NJ		0.192	0	0.1	0.0	0.0	10.9%	0.0%	
2,3,7,8-TCDD	0.00563	0.0225		--		0.002815		1	0.0	0.0	1.6%	0.0%	
1,2,3,7,8-PeCDF	0.428	1.712		E		0.214		0.05	0.0	0.0	6.1%	0.0%	
2,3,4,7,8-PeCDF	0.193	0.772		E		0.0965		0.5	0.0	0.0	27.4%	0.0%	
1,2,3,7,8-PeCDD	0.00418	0.0167		--		0.00209		1	0.0	0.0	1.2%	0.0%	
1,2,3,4,7,8-HxCDF	0.167	0.668		E		0.0835		0.1	0.0	0.0	4.7%	0.0%	
1,2,3,6,7,8-HxCDF	0.175	0.7		E	<5*B	0.0875		0.1	0.0	0.0	5.0%	0.0%	
2,3,4,6,7,8-HxCDF	0.0534	0.2136		--		0.0267		0.1	0.0	0.0	1.5%	0.0%	
1,2,3,7,8,9-HxCDF	0.323	1.292		E		0.1615		0.1	0.0	0.0	9.2%	0.0%	
1,2,3,4,7,8-HxCDD	0.00325	0.013		--		0.001625		0.1	0.0	0.0	0.1%	0.0%	
1,2,3,6,7,8-HxCDD	0.00275	0.011		--		0.001375		0.1	0.0	0.0	0.1%	0.0%	
1,2,3,7,8,9-HxCDD	0.00306	0.0122		J		0.00153		0.1	0.0	0.0	0.1%	0.0%	
1,2,3,4,6,7,8-HpCDF	0.0606	0.2424	0.417	B	<5*B	0.417	0.2085	0.01	0.0	0.0	2.4%	9.3%	
1,2,3,4,7,8,9-HpCDF	0.125	0.5		--		0.0625		0.01	0.0	0.0	0.4%	0.0%	
1,2,3,4,6,7,8-HpCDD	0.0375	0.15	1.37	--		1.37	1.37	0.01	0.0	0.0	7.8%	61.3%	
OCDF	0.0765	0.306	1.02	--		1.02	1.02	0.0001	0.0	0.0	0.1%	0.5%	
OCDD	0.0656	0.2624	10.3	--		10.3	10.3	0.0001	0.0	0.0	0.6%	4.6%	
PCB-81	0.0471	0.1884	0.561	B	<5*B	0.561	0.2805	0.0001	0.0	0.0	0.0%	0.1%	
PCB-77	0.0349	0.1396	3.67	B	<5*B	3.67	1.835	0.0001	0.0	0.0	0.2%	0.8%	
PCB-123	0.545	2.18		B	<5*B	0.2725		0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.479	1.916	42.2	BJ	<5*B	42.2	21.1	0.0001	0.0	0.0	2.4%	9.4%	
PCB-114	1.17	4.68		E	<5*B	0.585		0.0005	0.0	0.0	0.2%	0.0%	
PCB-105	0.449	1.796	18.8	B	<5*B	18.8	9.4	0.0001	0.0	0.0	1.1%	4.2%	
PCB-126	0.5	2		E		0.25		0.1	0.0	0.0	14.2%	0.0%	
PCB-167	0.192	0.768	3.05	B	<5*B	3.05	1.525	0.00001	0.0	0.0	0.0%	0.1%	
PCB-156	0.189	0.756	6.7	B	<5*B	6.7	3.35	0.0005	0.0	0.0	1.9%	7.5%	
PCB-157	0.195	0.78	1.79	B	<5*B	1.79	0.895	0.0005	0.0	0.0	0.5%	2.0%	
PCB-169	0.12	0.48		E		0.06		0.01	0.0	0.0	0.3%	0.0%	
PCB-189	0.174	0.696	0.478	--		0.478	0.239	0.0001	0.0	0.0	0.0%	0.1%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.1	0.0	0.0	0.0	0.2	0.0

Sample ID	945	Field		S32								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.208	0.832		E		0.104		0.1	0.0	0.0	1.0%	0.0%
2,3,7,8-TCDD	0.0045	0.018		--		0.00225		1	0.0	0.0	0.2%	0.0%
1,2,3,7,8-PeCDF	0.0201	0.0804	0.474	--		0.474	0.474	0.05	0.0	0.0	2.3%	3.1%
2,3,4,7,8-PeCDF	0.0125	0.05	0.21	--		0.21	0.21	0.5	0.1	0.1	10.0%	13.8%
1,2,3,7,8-PeCDD	0.37	1.48		E		0.185		1	0.2	0.0	17.7%	0.0%
1,2,3,4,7,8-HxCDF	0.0191	0.0764	0.594	--		0.594	0.594	0.1	0.1	0.1	5.7%	7.8%
1,2,3,6,7,8-HxCDF	0.0184	0.0736	0.505	B	<5*B	0.505	0.2525	0.1	0.1	0.0	4.8%	3.3%
2,3,4,6,7,8-HxCDF	0.0193	0.0772	0.414	--		0.414	0.414	0.1	0.0	0.0	4.0%	5.4%
1,2,3,7,8,9-HxCDF	0.0228	0.0912	0.566	--		0.566	0.566	0.1	0.1	0.1	5.4%	7.4%
1,2,3,4,7,8-HxCDD	0.366	1.464		E		0.183		0.1	0.0	0.0	1.7%	0.0%
1,2,3,6,7,8-HxCDD	0.0132	0.0528	0.683	--		0.683	0.683	0.1	0.1	0.1	6.5%	9.0%
1,2,3,7,8,9-HxCDD	0.0148	0.0592	0.639	J		0.639	0.3195	0.1	0.1	0.0	6.1%	4.2%
1,2,3,4,6,7,8-HpCDF	0.0296	0.1184	2.95	--		2.95	2.95	0.01	0.0	0.0	2.8%	3.9%
1,2,3,4,7,8,9-HpCDF	0.0413	0.1652	0.716	--		0.716	0.716	0.01	0.0	0.0	0.7%	0.9%
1,2,3,4,6,7,8-HpCDD	0.0277	0.1108	6.98	--		6.98	6.98	0.01	0.1	0.1	6.7%	9.1%
OCDF	0.0223	0.0892	11.7	--		11.7	11.7	0.0001	0.0	0.0	0.1%	0.2%
OCDD	0.0261	0.1044	51	--		51	51	0.0001	0.0	0.0	0.5%	0.7%
PCB-81	0.0433	0.1732	0.902	B	<5*B	0.902	0.451	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0331	0.1324	11	B	<5*B	11	5.5	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	1.02	4.08	3.51	B	<5*B	3.51	0.8775	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.898	3.592	121	BJ	<5*B	121	60.5	0.0001	0.0	0.0	1.2%	0.8%
PCB-114	0.857	3.428	2.82	B	<5*B	2.82	0.705	0.0005	0.0	0.0	0.1%	0.0%
PCB-105	0.82	3.28	60.7	--		60.7	60.7	0.0001	0.0	0.0	0.6%	0.8%
PCB-126	0.113	0.452	2.16	--		2.16	2.16	0.1	0.2	0.2	20.6%	28.3%
PCB-167	0.324	1.296	8.04	--		8.04	8.04	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.319	1.276	16.4	--		16.4	16.4	0.0005	0.0	0.0	0.8%	1.1%
PCB-157	0.329	1.316	4.27	B	<5*B	4.27	2.135	0.0005	0.0	0.0	0.2%	0.1%
PCB-169	0.273	1.092		E		0.1365		0.01	0.0	0.0	0.1%	0.0%
PCB-189	0.222	0.888	1.55	--		1.55	1.55	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.8	0.5	0.2	0.2	1.0	0.8

Sample ID	991	Field	S36									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.102	0.408	0.601	NJ		0.3005	0	0.1	0.0	0.0	1.5%	0.0%
2,3,7,8-TCDD	0.0458	0.1832		--		0.0229		1	0.0	0.0	1.2%	0.0%
1,2,3,7,8-PeCDF	0.0266	0.1064	2.46	--		2.46	2.46	0.05	0.1	0.1	6.2%	7.3%
2,3,4,7,8-PeCDF	0.586	2.344		E		0.293		0.5	0.1	0.0	7.4%	0.0%
1,2,3,7,8-PeCDD	0.0262	0.1048		--		0.0131		1	0.0	0.0	0.7%	0.0%
1,2,3,4,7,8-HxCDF	0.0313	0.1252	3.59	--		3.59	3.59	0.1	0.4	0.4	18.1%	21.2%
1,2,3,6,7,8-HxCDF	0.0271	0.1084	1.91	--		1.91	1.91	0.1	0.2	0.2	9.6%	11.3%
2,3,4,6,7,8-HxCDF	0.0314	0.1256	0.992	--		0.992	0.992	0.1	0.1	0.1	5.0%	5.9%
1,2,3,7,8,9-HxCDF	0.0376	0.1504	1.1	B	<5*B	1.1	0.55	0.1	0.1	0.1	5.6%	3.3%
1,2,3,4,7,8-HxCDD	0.0315	0.126	0.385	--		0.385	0.385	0.1	0.0	0.0	1.9%	2.3%
1,2,3,6,7,8-HxCDD	0.0265	0.106	0.713	--		0.713	0.713	0.1	0.1	0.1	3.6%	4.2%
1,2,3,7,8,9-HxCDD	0.0297	0.1188	0.804	--		0.804	0.804	0.1	0.1	0.1	4.1%	4.8%
1,2,3,4,6,7,8-HpCDF	0.042	0.168	11.3	--		11.3	11.3	0.01	0.1	0.1	5.7%	6.7%
1,2,3,4,7,8,9-HpCDF	0.0564	0.2256	3.99	--		3.99	3.99	0.01	0.0	0.0	2.0%	2.4%
1,2,3,4,6,7,8-HpCDD	0.0281	0.1124	7.69	--		7.69	7.69	0.01	0.1	0.1	3.9%	4.5%
OCDF	0.0259	0.1036	78	--		78	78	0.0001	0.0	0.0	0.4%	0.5%
OCDD	0.0281	0.1124	78.7	--		78.7	78.7	0.0001	0.0	0.0	0.4%	0.5%
PCB-81	1.89	7.56	3.39	B	<5*B	3.39	0.8475	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	1.56	6.24	20.7	--		20.7	20.7	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	1.52	6.08	7.71	--		7.71	7.71	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	1.36	5.44	188	BJ	<5*B	188	94	0.0001	0.0	0.0	0.9%	0.6%
PCB-114	3.52	14.08		E		1.76		0.0005	0.0	0.0	0.0%	0.0%
PCB-105	1.44	5.76	91.9	B	<5*B	91.9	45.95	0.0001	0.0	0.0	0.5%	0.3%
PCB-126	0.171	0.684	3.95	--		3.95	3.95	0.1	0.4	0.4	19.9%	23.4%
PCB-167	0.469	1.876	12.7	J		12.7	6.35	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.482	1.928	26.3	B	<5*B	26.3	13.15	0.0005	0.0	0.0	0.7%	0.4%
PCB-157	0.508	2.032	9.07	--		9.07	9.07	0.0005	0.0	0.0	0.2%	0.3%
PCB-169	0.0913	0.3652	0.489	--		0.489	0.489	0.01	0.0	0.0	0.2%	0.3%
PCB-189	0.156	0.624	3.61	--		3.61	3.61	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.5	1.3	0.5	0.4	2.0	1.7

Sample ID	389	Field	S35	S3	RMA							
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag	Full	Quant	Human	Full	Quant	Full	Quant	
2,3,7,8-TCDF	1.75	7	1.04	U_NJ	0.875		0.1	0.1	0.0	1.7%	0.0%	
2,3,7,8-TCDD	0.0484	0.1936	--		0.0242		1	0.0	0.0	0.5%	0.0%	
1,2,3,7,8-PeCDF	0.0259	0.1036	5.2	--	5.2	5.2	0.05	0.3	0.3	5.1%	6.5%	
2,3,4,7,8-PeCDF	0.0203	0.0812	1.17	--	1.17	1.17	0.5	0.6	0.6	11.5%	14.7%	
1,2,3,7,8-PeCDD	0.366	1.464	--	E	0.183		1	0.2	0.0	3.6%	0.0%	
1,2,3,4,7,8-HxCDF	0.0232	0.0928	8.21	--	8.21	8.21	0.1	0.8	0.8	16.1%	20.6%	
1,2,3,6,7,8-HxCDF	0.0208	0.0832	4.2	--	4.2	4.2	0.1	0.4	0.4	8.2%	10.5%	
2,3,4,6,7,8-HxCDF	0.0246	0.0984	2.21	--	2.21	2.21	0.1	0.2	0.2	4.3%	5.5%	
1,2,3,7,8,9-HxCDF	0.0291	0.1164	2.16	B	2.16	1.08	0.1	0.2	0.1	4.2%	2.7%	
1,2,3,4,7,8-HxCDD	0.0313	0.1252	0.534	B	0.534	0.267	0.1	0.1	0.0	1.0%	0.7%	
1,2,3,6,7,8-HxCDD	0.0285	0.114	0.918	--	0.918	0.918	0.1	0.1	0.1	1.8%	2.3%	
1,2,3,7,8,9-HxCDD	0.031	0.124	0.764	--	0.764	0.764	0.1	0.1	0.1	1.5%	1.9%	
1,2,3,4,6,7,8-HpCDF	0.0434	0.1736	23.7	--	23.7	23.7	0.01	0.2	0.2	4.7%	5.9%	
1,2,3,4,7,8,9-HpCDF	0.0631	0.2524	9.81	--	9.81	9.81	0.01	0.1	0.1	1.9%	2.5%	
1,2,3,4,6,7,8-HpCDD	0.0555	0.222	18.5	--	<5*B	18.5	18.5	0.01	0.2	0.2	3.6%	4.6%
OCDF	0.022	0.088	142	--	142	142	0.0001	0.0	0.0	0.3%	0.4%	
OCDD	0.0483	0.1932	142	--	142	142	0.0001	0.0	0.0	0.3%	0.4%	
PCB-81	0.142	0.568	2.92	B	2.92	1.46	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.141	0.564	76.8	--	<5*B	76.8	76.8	0.0001	0.0	0.0	0.2%	0.2%
PCB-123	1.79	7.16	--		0.895		0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	1.6	6.4	809	CJ	809	404.5	0.0001	0.1	0.0	1.6%	1.0%	
PCB-114	1.9	7.6	21.1	--	21.1	21.1	0.0005	0.0	0.0	0.2%	0.3%	
PCB-105	1.91	7.64	406	--	406	406	0.0001	0.0	0.0	0.8%	1.0%	
PCB-126	6.69	26.76	12.7	--	<5*B	12.7	6.35	0.1	1.3	0.6	24.9%	15.9%
PCB-167	0.799	3.196	60.5	--	60.5	60.5	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.823	3.292	134	--	134	134	0.0005	0.1	0.1	1.3%	1.7%	
PCB-157	0.867	3.468	32.1	--	32.1	32.1	0.0005	0.0	0.0	0.3%	0.4%	
PCB-169	0.0625	0.25	1.14	--	<5*B	1.14	1.14	0.01	0.0	0.0	0.2%	0.3%
PCB-189	1.1	4.4	19	--	<5*B	19	19	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
3.6	3.2	1.5	0.8	5.1	4.0

Sample ID	429	Field	S2	S2	RMA							
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag	Full	Quant	Human	Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.374	1.496	1.23	U_NJ		1.23	0.3075	0.1	0.1	0.0	1.5%	0.4%
2,3,7,8-TCDD	0.0718	0.2872	1.38	--		1.38	1.38	1	1.4	1.4	16.4%	16.9%
1,2,3,7,8-PeCDF	0.0246	0.0984	5.15	--		5.15	5.15	0.05	0.3	0.3	3.1%	3.2%
2,3,4,7,8-PeCDF	0.02	0.08	1.53	--		1.53	1.53	0.5	0.8	0.8	9.1%	9.4%
1,2,3,7,8-PeCDD	0.0105	0.042	0.799	--		0.799	0.799	1	0.8	0.8	9.5%	9.8%
1,2,3,4,7,8-HxCDF	0.0449	0.1796	9.3	--		9.3	9.3	0.1	0.9	0.9	11.1%	11.4%
1,2,3,6,7,8-HxCDF	0.0386	0.1544	4.46	--		4.46	4.46	0.1	0.4	0.4	5.3%	5.5%
2,3,4,6,7,8-HxCDF	0.047	0.188	2.22	--		2.22	2.22	0.1	0.2	0.2	2.6%	2.7%
1,2,3,7,8,9-HxCDF	0.0501	0.2004	2.14	B		2.14	1.07	0.1	0.2	0.1	2.5%	1.3%
1,2,3,4,7,8-HxCDD	0.0348	0.1392	1.38	--		1.38	1.38	0.1	0.1	0.1	1.6%	1.7%
1,2,3,6,7,8-HxCDD	0.0312	0.1248	3.04	--		3.04	3.04	0.1	0.3	0.3	3.6%	3.7%
1,2,3,7,8,9-HxCDD	0.0341	0.1364	2.51	--		2.51	2.51	0.1	0.3	0.3	3.0%	3.1%
1,2,3,4,6,7,8-HpCDF	0.0217	0.0868	38.8	--		38.8	38.8	0.01	0.4	0.4	4.6%	4.8%
1,2,3,4,7,8,9-HpCDF	0.0282	0.1128	9.37	--		9.37	9.37	0.01	0.1	0.1	1.1%	1.1%
1,2,3,4,6,7,8-HpCDD	0.0583	0.2332	84.2	--		84.2	84.2	0.01	0.8	0.8	10.0%	10.3%
OCDF	0.0222	0.0888	152	--		152	152	0.0001	0.0	0.0	0.2%	0.2%
OCDD	0.0229	0.0916	785	--		785	785	0.0001	0.1	0.1	0.9%	1.0%
PCB-81	0.082	0.328	1.64	B	<5*B	1.64	0.82	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0878	0.3512	40.7	--	<5*B	40.7	40.7	0.0001	0.0	0.0	0.0%	0.0%
PCB-123	0.529	2.116	--		0.2645		0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.471	1.884	1010	CJ		1010	505	0.0001	0.1	0.1	1.2%	0.6%
PCB-114	0.55	2.2	23.7	--		23.7	23.7	0.0005	0.0	0.0	0.1%	0.1%
PCB-105	0.553	2.212	462	--		462	462	0.0001	0.0	0.0	0.6%	0.6%
PCB-126	1.03	4.12	8.85	--	<5*B	8.85	8.85	0.1	0.9	0.9	10.5%	10.9%
PCB-167	0.427	1.708	58.7	--		58.7	58.7	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.44	1.76	143	--		143	143	0.0005	0.1	0.1	0.9%	0.9%
PCB-157	0.464	1.856	36.2	--		36.2	36.2	0.0005	0.0	0.0	0.2%	0.2%
PCB-169	0.0483	0.1932	1.24	--	<5*B	1.24	1.24	0.01	0.0	0.0	0.1%	0.2%
PCB-189	0.298	1.192	13.8	--	<5*B	13.8	13.8	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
7.2	7.0	1.2	1.1	8.4	8.1

Sample ID	463	Field	S1	S1	RMA								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag	Full	Quant	Human	Full	Quant	Full	Quant		
2,3,7,8-TCDF	0.821	3.284	2.07	U_NJ		2.07	0.5175	0.1	0.2	0.1	0.8%	0.2%	
2,3,7,8-TCDD	0.0871	0.3484	--		0.04355		1	0.0	0.0	0.0	0.2%	0.0%	
1,2,3,7,8-PeCDF	0.0544	0.2176	23.1	--	23.1	23.1	0.05	1.2	1.2	4.4%	4.6%		
2,3,4,7,8-PeCDF	0.0404	0.1616	3.12	--	3.12	3.12	0.5	1.6	1.6	5.9%	6.2%		
1,2,3,7,8-PeCDD	0.0431	0.1724	0.673	--	0.673	0.673	1	0.7	0.7	2.6%	2.7%		
1,2,3,4,7,8-HxCDF	0.232	0.928	71.8	--	71.8	71.8	0.1	7.2	7.2	27.4%	28.6%		
1,2,3,6,7,8-HxCDF	0.206	0.824	27	--	27	27	0.1	2.7	2.7	10.3%	10.8%		
2,3,4,6,7,8-HxCDF	0.298	1.192	12.4	--	12.4	12.4	0.1	1.2	1.2	4.7%	4.9%		
1,2,3,7,8,9-HxCDF	0.502	2.008	22.1	--	22.1	22.1	0.1	2.2	2.2	8.4%	8.8%		
1,2,3,4,7,8-HxCDD	0.748	2.992	E		0.374		0.1	0.0	0.0	0.1%	0.0%		
1,2,3,6,7,8-HxCDD	0.0325	0.13	1.02	--	1.02	1.02	0.1	0.1	0.1	0.4%	0.4%		
1,2,3,7,8,9-HxCDD	1.04	4.16	E		0.52		0.1	0.1	0.0	0.2%	0.0%		
1,2,3,4,6,7,8-HpCDF	0.234	0.936	458	--	458	458	0.01	4.6	4.6	17.5%	18.2%		
1,2,3,4,7,8,9-HpCDF	0.529	2.116	251	--	251	251	0.01	2.5	2.5	9.6%	10.0%		
1,2,3,4,6,7,8-HpCDD	0.195	0.78	17.4	--	<5*B	17.4	17.4	0.01	0.2	0.2	0.7%	0.7%	
OCDF	0.0855	0.342	9630	CJ		9630	4815	0.0001	1.0	0.5	3.7%	1.9%	
OCDD	0.151	0.604	134	--		134	134	0.0001	0.0	0.0	0.1%	0.1%	
PCB-81	0.11	0.44	1.2	B	<5*B	1.2	0.6	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.12	0.48	22.7	--	<5*B	22.7	22.7	0.0001	0.0	0.0	0.0%	0.0%	
PCB-123	1.26	5.04	--		0.63		0.0001	0.0	0.0	0.0%	0.0%		
PCB-118	1.12	4.48	1130	CJ		1130	565	0.0001	0.1	0.1	0.4%	0.2%	
PCB-114	1.34	5.36	31.2	--		31.2	31.2	0.0005	0.0	0.0	0.1%	0.1%	
PCB-105	1.35	5.4	491	CJ		491	245.5	0.0001	0.0	0.0	0.2%	0.1%	
PCB-126	1.94	7.76	5.3	--	<5*B	5.3	2.65	0.1	0.5	0.3	2.0%	1.1%	
PCB-167	0.618	2.472	64.1	--		64.1	64.1	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.636	2.544	163	--		163	163	0.0005	0.1	0.1	0.3%	0.3%	
PCB-157	0.671	2.684	39.6	--		39.6	39.6	0.0005	0.0	0.0	0.1%	0.1%	
PCB-169	0.102	0.408	0.921	--	<5*B	0.921	0.921	0.01	0.0	0.0	0.0%	0.0%	
PCB-189	0.937	3.748	14	--	<5*B	14	14	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
25.4	24.6	0.8	0.5	26.2	25.1

Sample ID	282-B	<i>Bulk</i>		<i>bulk</i>								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.221	0.884	7.37	U_NJ		7.37	3.685	0.1	0.7	0.4	2.6%	1.3%
2,3,7,8-TCDD	0.105	0.42	1.3	--		1.3	1.3	1	1.3	1.3	4.5%	4.6%
1,2,3,7,8-PeCDF	0.0877	0.3508	42.7	--		42.7	42.7	0.05	2.1	2.1	7.4%	7.5%
2,3,4,7,8-PeCDF	0.0592	0.2368	5.92	--		5.92	5.92	0.5	3.0	3.0	10.3%	10.4%
1,2,3,7,8-PeCDD	0.245	0.98	1.52	--		1.52	1.52	1	1.5	1.5	5.3%	5.4%
1,2,3,4,7,8-HxCDF	0.294	1.176	66.8	--		66.8	66.8	0.1	6.7	6.7	23.1%	23.5%
1,2,3,6,7,8-HxCDF	0.203	0.812	37.8	--		37.8	37.8	0.1	3.8	3.8	13.1%	13.3%
2,3,4,6,7,8-HxCDF	0.301	1.204	16.5	--		16.5	16.5	0.1	1.7	1.7	5.7%	5.8%
1,2,3,7,8,9-HxCDF	0.359	1.436	16.3	--		16.3	16.3	0.1	1.6	1.6	5.6%	5.7%
1,2,3,4,7,8-HxCDD	1.05	4.2		E		0.525		0.1	0.1	0.0	0.2%	0.0%
1,2,3,6,7,8-HxCDD	0.0742	0.2968	1.99	--		1.99	1.99	0.1	0.2	0.2	0.7%	0.7%
1,2,3,7,8,9-HxCDD	0.0878	0.3512	1.23	J		1.23	0.615	0.1	0.1	0.1	0.4%	0.2%
1,2,3,4,6,7,8-HpCDF	0.0766	0.3064	173	--		173	173	0.01	1.7	1.7	6.0%	6.1%
1,2,3,4,7,8,9-HpCDF	0.102	0.408	74.8	--		74.8	74.8	0.01	0.7	0.7	2.6%	2.6%
1,2,3,4,6,7,8-HpCDD	0.198	0.792	23	--		23	23	0.01	0.2	0.2	0.8%	0.8%
OCDF	0.0448	0.1792	1070	S		1070	1070	0.0001	0.1	0.1	0.4%	0.4%
OCDD	0.0634	0.2536	169	--		169	169	0.0001	0.0	0.0	0.1%	0.1%
PCB-81	0.29	1.16	21.9	--		21.9	21.9	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.295	1.18	559	C		559	559	0.0001	0.1	0.1	0.2%	0.2%
PCB-123	5.05	20.2	95.3	--		95.3	95.3	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	4.44	17.76	2400	C		2400	2400	0.0001	0.2	0.2	0.8%	0.8%
PCB-114	4.18	16.72	90.7	--		90.7	90.7	0.0005	0.0	0.0	0.2%	0.2%
PCB-105	4	16	1790	C		1790	1790	0.0001	0.2	0.2	0.6%	0.6%
PCB-126	0.431	1.724	26.1	--		26.1	26.1	0.1	2.6	2.6	9.0%	9.2%
PCB-167	1.04	4.16	72.8	--		72.8	72.8	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	1.02	4.08	136	--		136	136	0.0005	0.1	0.1	0.2%	0.2%
PCB-157	1.05	4.2	35.6	--		35.6	35.6	0.0005	0.0	0.0	0.1%	0.1%
PCB-169	0.173	0.692	2.71	--		2.71	2.71	0.01	0.0	0.0	0.1%	0.1%
PCB-189	0.529	2.116	21.7	--		21.7	21.7	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
25.6	25.1	3.3	3.3	28.9	28.4

Sample ID	347-B	Bulk	bulk									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag	Full	Quant	Human	Full	Quant	Full	Quant	
2,3,7,8-TCDF	1.56	6.24	17.4	U_NJ	17.4	8.7	0.1	1.7	0.9	2.1%	1.1%	
2,3,7,8-TCDD	0.0981	0.3924	0.881	--	0.881	0.881	1	0.9	0.9	1.1%	1.1%	
1,2,3,7,8-PeCDF	0.0874	0.3496	118	--	118	118	0.05	5.9	5.9	7.2%	7.4%	
2,3,4,7,8-PeCDF	0.0742	0.2968	19.9	--	19.9	19.9	0.5	10.0	10.0	12.2%	12.5%	
1,2,3,7,8-PeCDD	0.0136	0.0544	5.52	--	5.52	5.52	1	5.5	5.5	6.8%	6.9%	
1,2,3,4,7,8-HxCDF	0.148	0.592	183	--	183	183	0.1	18.3	18.3	22.4%	22.9%	
1,2,3,6,7,8-HxCDF	0.129	0.516	96.2	--	96.2	96.2	0.1	9.6	9.6	11.8%	12.0%	
2,3,4,6,7,8-HxCDF	0.17	0.68	41.6	--	41.6	41.6	0.1	4.2	4.2	5.1%	5.2%	
1,2,3,7,8,9-HxCDF	0.197	0.788	48.7	--	48.7	48.7	0.1	4.9	4.9	6.0%	6.1%	
1,2,3,4,7,8-HxCDD	0.123	0.492	8.31	--	8.31	8.31	0.1	0.8	0.8	1.0%	1.0%	
1,2,3,6,7,8-HxCDD	0.112	0.448	14.2	--	14.2	14.2	0.1	1.4	1.4	1.7%	1.8%	
1,2,3,7,8,9-HxCDD	0.122	0.488	8.83	--	8.83	8.83	0.1	0.9	0.9	1.1%	1.1%	
1,2,3,4,6,7,8-HpCDF	0.243	0.972	476	--	476	476	0.01	4.8	4.8	5.8%	6.0%	
1,2,3,4,7,8,9-HpCDF	0.362	1.448	234	--	234	234	0.01	2.3	2.3	2.9%	2.9%	
1,2,3,4,6,7,8-HpCDD	0.274	1.096	370	--	370	370	0.01	3.7	3.7	4.5%	4.6%	
OCDF	0.0578	0.2312	2660	CJ	2660	1330	0.0001	0.3	0.1	0.3%	0.2%	
OCDD	0.119	0.476	3070	CJ	3070	1535	0.0001	0.3	0.2	0.4%	0.2%	
PCB-81	1.09	4.36	7.09	--	7.09	7.09	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	1.11	4.44	174	--	<5*B	174	0.0001	0.0	0.0	0.0%	0.0%	
PCB-123	4.8	19.2	--		2.4		0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	4.27	17.08	6280	CJ	6280	3140	0.0001	0.6	0.3	0.8%	0.4%	
PCB-114	5.66	22.64	236	--	236	236	0.0005	0.1	0.1	0.1%	0.1%	
PCB-105	5.7	22.8	2760	CJ	2760	1380	0.0001	0.3	0.1	0.3%	0.2%	
PCB-126	2.77	11.08	44	--	44	44	0.1	4.4	4.4	5.4%	5.5%	
PCB-167	1.89	7.56	583	CJ	583	291.5	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	1.94	7.76	1250	CJ	1250	625	0.0005	0.6	0.3	0.8%	0.4%	
PCB-157	2.05	8.2	303	--	303	303	0.0005	0.2	0.2	0.2%	0.2%	
PCB-169	0.193	0.772	6.82	--	<5*B	6.82	0.01	0.1	0.1	0.1%	0.1%	
PCB-189	3.59	14.36	223	--	223	223	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
75.4	74.3	6.3	5.5	81.8	79.8

Sample ID	429-B	Bulk	bulk									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.705	2.82	1.13	U_NJ		1.13	0.2825	0.1	0.1	0.0	1.6%	0.5%
2,3,7,8-TCDD	0.0689	0.2756	1.9	--		1.9	1.9	1	1.9	1.9	27.7%	32.3%
1,2,3,7,8-PeCDF	0.0339	0.1356	4.19	--		4.19	4.19	0.05	0.2	0.2	3.1%	3.6%
2,3,4,7,8-PeCDF	0.0279	0.1116	1.4	--		1.4	1.4	0.5	0.7	0.7	10.2%	11.9%
1,2,3,7,8-PeCDD	0.658	2.632		E		0.329		1	0.3	0.0	4.8%	0.0%
1,2,3,4,7,8-HxCDF	0.0701	0.2804	6.81	--		6.81	6.81	0.1	0.7	0.7	9.9%	11.6%
1,2,3,6,7,8-HxCDF	0.0558	0.2232	3.59	--		3.59	3.59	0.1	0.4	0.4	5.2%	6.1%
2,3,4,6,7,8-HxCDF	0.0691	0.2764	1.99	--		1.99	1.99	0.1	0.2	0.2	2.9%	3.4%
1,2,3,7,8,9-HxCDF	0.0662	0.2648	1.55	B		1.55	0.775	0.1	0.2	0.1	2.3%	1.3%
1,2,3,4,7,8-HxCDD	0.0648	0.2592	0.862	B		0.862	0.431	0.1	0.1	0.0	1.3%	0.7%
1,2,3,6,7,8-HxCDD	0.0587	0.2348	2.02	--		2.02	2.02	0.1	0.2	0.2	2.9%	3.4%
1,2,3,7,8,9-HxCDD	0.0638	0.2552	1.3	--		1.3	1.3	0.1	0.1	0.1	1.9%	2.2%
1,2,3,4,6,7,8-HpCDF	0.225	0.9	22.4	--		22.4	22.4	0.01	0.2	0.2	3.3%	3.8%
1,2,3,4,7,8,9-HpCDF	0.31	1.24	6.45	--		6.45	6.45	0.01	0.1	0.1	0.9%	1.1%
1,2,3,4,6,7,8-HpCDD	0.0786	0.3144	42.1	--		42.1	42.1	0.01	0.4	0.4	6.1%	7.2%
OCDF	0.0543	0.2172	90.2	--		90.2	90.2	0.0001	0.0	0.0	0.1%	0.2%
OCDD	0.0423	0.1692	303	--		303	303	0.0001	0.0	0.0	0.4%	0.5%
PCB-81	0.139	0.556	1.88	B	<5*B	1.88	0.94	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.152	0.608	38.1	--	<5*B	38.1	38.1	0.0001	0.0	0.0	0.1%	0.1%
PCB-123	1.13	4.52		--		0.565		0.0001	0.0	0.0	0.0%	0.0%
PCB-118	1.01	4.04	1120	CJ		1120	560	0.0001	0.1	0.1	1.6%	1.0%
PCB-114	1.09	4.36	26.2	--		26.2	26.2	0.0005	0.0	0.0	0.2%	0.2%
PCB-105	1.1	4.4	479	--		479	479	0.0001	0.0	0.0	0.7%	0.8%
PCB-126	2.33	9.32	7.64	--	<5*B	7.64	3.82	0.1	0.8	0.4	11.1%	6.5%
PCB-167	0.714	2.856	64.7	--		64.7	64.7	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.735	2.94	148	--		148	148	0.0005	0.1	0.1	1.1%	1.3%
PCB-157	0.774	3.096	36.4	--		36.4	36.4	0.0005	0.0	0.0	0.3%	0.3%
PCB-169	0.087	0.348	0.927	--	<5*B	0.927	0.927	0.01	0.0	0.0	0.1%	0.2%
PCB-189	0.87	3.48	13.3	--	<5*B	13.3	13.3	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
5.8	5.3	1.0	0.6	6.9	5.9

Sample ID	515-B	<i>Bulk</i>		<i>bulk</i>								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.346	1.384	7.47	U_NJ		7.47	3.735	0.1	0.7	0.4	3.7%	1.9%
2,3,7,8-TCDD	0.136	0.544	--			0.068		1	0.1	0.0	0.3%	0.0%
1,2,3,7,8-PeCDF	0.0865	0.346	30.1	--		30.1	30.1	0.05	1.5	1.5	7.5%	7.7%
2,3,4,7,8-PeCDF	0.0689	0.2756	4.97	--		4.97	4.97	0.5	2.5	2.5	12.3%	12.7%
1,2,3,7,8-PeCDD	0.0341	0.1364	0.697	--		0.697	0.697	1	0.7	0.7	3.5%	3.6%
1,2,3,4,7,8-HxCDF	0.0745	0.298	51.7	--		51.7	51.7	0.1	5.2	5.2	25.6%	26.4%
1,2,3,6,7,8-HxCDF	0.0648	0.2592	26.5	--		26.5	26.5	0.1	2.7	2.7	13.1%	13.5%
2,3,4,6,7,8-HxCDF	0.0753	0.3012	10.1	--		10.1	10.1	0.1	1.0	1.0	5.0%	5.2%
1,2,3,7,8,9-HxCDF	0.0815	0.326	11.5	--		11.5	11.5	0.1	1.2	1.2	5.7%	5.9%
1,2,3,4,7,8-HxCDD	0.0848	0.3392	1.27	--		1.27	1.27	0.1	0.1	0.1	0.6%	0.6%
1,2,3,6,7,8-HxCDD	0.0797	0.3188	1.53	--		1.53	1.53	0.1	0.2	0.2	0.8%	0.8%
1,2,3,7,8,9-HxCDD	1.03	4.12	E			0.515		0.1	0.1	0.0	0.3%	0.0%
1,2,3,4,6,7,8-HpCDF	0.102	0.408	147	--		147	147	0.01	1.5	1.5	7.3%	7.5%
1,2,3,4,7,8,9-HpCDF	0.149	0.596	74.1	--		74.1	74.1	0.01	0.7	0.7	3.7%	3.8%
1,2,3,4,6,7,8-HpCDD	0.0608	0.2432	24	--	<5*B	24	24	0.01	0.2	0.2	1.2%	1.2%
OCDF	0.0467	0.1868	1830	CJ		1830	915	0.0001	0.2	0.1	0.9%	0.5%
OCDD	0.0793	0.3172	176	--		176	176	0.0001	0.0	0.0	0.1%	0.1%
PCB-81	0.383	1.532	7.87	--		7.87	7.87	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.436	1.744	76	--	<5*B	76	76	0.0001	0.0	0.0	0.0%	0.0%
PCB-123	1.49	5.96	--			0.745		0.0001	0.0	0.0	0.0%	0.0%
PCB-118	1.32	5.28	777	CJ		777	388.5	0.0001	0.1	0.0	0.4%	0.2%
PCB-114	1.65	6.6	--			0.825		0.0005	0.0	0.0	0.0%	0.0%
PCB-105	1.66	6.64	401	--		401	401	0.0001	0.0	0.0	0.2%	0.2%
PCB-126	2.21	8.84	14.8	--	<5*B	14.8	14.8	0.1	1.5	1.5	7.3%	7.6%
PCB-167	2.35	9.4	78.3	--		78.3	78.3	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	2.41	9.64	142	--		142	142	0.0005	0.1	0.1	0.4%	0.4%
PCB-157	2.55	10.2	41.3	--		41.3	41.3	0.0005	0.0	0.0	0.1%	0.1%
PCB-169	0.238	0.952	1.98	--	<5*B	1.98	1.98	0.01	0.0	0.0	0.1%	0.1%
PCB-189	5.32	21.28	25.5	--	<5*B	25.5	25.5	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
18.5	17.9	1.7	1.7	20.2	19.6

Sample ID	338	Duplicate	dup 521										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.057	0.228		--		0.0285		0.1	0.0	0.0	0.5%	0.0%	
2,3,7,8-TCDD	0.0328	0.1312		--		0.0164		1	0.0	0.0	3.0%	0.0%	
1,2,3,7,8-PeCDF	0.0178	0.0712	0.158	--		0.158	0.158	0.05	0.0	0.0	1.5%	2.0%	
2,3,4,7,8-PeCDF	0.118	0.472		E		0.059		0.5	0.0	0.0	5.4%	0.0%	
1,2,3,7,8-PeCDD	0.0149	0.0596		--		0.00745		1	0.0	0.0	1.4%	0.0%	
1,2,3,4,7,8-HxCDF	0.0247	0.0988	0.144	B	<5*B	0.144	0.072	0.1	0.0	0.0	2.7%	1.8%	
1,2,3,6,7,8-HxCDF	0.0217	0.0868	0.279	--		0.279	0.279	0.1	0.0	0.0	5.1%	7.1%	
2,3,4,6,7,8-HxCDF	0.154	0.616		E	<5*B	0.077		0.1	0.0	0.0	1.4%	0.0%	
1,2,3,7,8,9-HxCDF	0.0272	0.1088	0.372	B	<5*B	0.372	0.186	0.1	0.0	0.0	6.8%	4.7%	
1,2,3,4,7,8-HxCDD	0.194	0.776		E		0.097		0.1	0.0	0.0	1.8%	0.0%	
1,2,3,6,7,8-HxCDD	0.00641	0.0256	0.874	--		0.874	0.874	0.1	0.1	0.1	16.1%	22.3%	
1,2,3,7,8,9-HxCDD	0.00716	0.0286	1.61	--		1.61	1.61	0.1	0.2	0.2	29.6%	41.0%	
1,2,3,4,6,7,8-HpCDF	0.0368	0.1472	0.79	--		0.79	0.79	0.01	0.0	0.0	1.5%	2.0%	
1,2,3,4,7,8,9-HpCDF	0.0499	0.1996	0.144	--		0.144	0.072	0.01	0.0	0.0	0.3%	0.2%	
1,2,3,4,6,7,8-HpCDD	0.0217	0.0868	2.28	--		2.28	2.28	0.01	0.0	0.0	4.2%	5.8%	
OCDF	0.0171	0.0684	2.11	B	<5*B	2.11	1.055	0.0001	0.0	0.0	0.0%	0.0%	
OCDD	0.0118	0.0472	15	--		15	15	0.0001	0.0	0.0	0.3%	0.4%	
PCB-81	1.22	4.88		--	<5*B	0.61		0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	1.08	4.32	4.35	B	<5*B	4.35	2.175	0.0001	0.0	0.0	0.1%	0.1%	
PCB-123	0.357	1.428	1.69	B	<5*B	1.69	0.845	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.318	1.272	45.5	BJ	<5*B	45.5	22.75	0.0001	0.0	0.0	0.8%	0.6%	
PCB-114	0.901	3.604		E		0.4505		0.0005	0.0	0.0	0.0%	0.0%	
PCB-105	0.323	1.292	20.3	B	<5*B	20.3	10.15	0.0001	0.0	0.0	0.4%	0.3%	
PCB-126	0.0939	0.3756	0.876	B	<5*B	0.876	0.438	0.1	0.1	0.0	16.1%	11.2%	
PCB-167	0.224	0.896	2.36	BJ	<5*B	2.36	1.18	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.23	0.92	5.09	B	<5*B	5.09	2.545	0.0005	0.0	0.0	0.5%	0.3%	
PCB-157	1.72	6.88		E	<5*B	0.86		0.0005	0.0	0.0	0.1%	0.0%	
PCB-169	0.0649	0.2596	0.187	--		0.187	0.0935	0.01	0.0	0.0	0.3%	0.2%	
PCB-189	0.148	0.592	0.583	--		0.583	0.2915	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.4	0.3	0.1	0.0	0.5	0.4

Sample ID	GAAXMB	<i>Lab Blank</i>										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0496	0.1984		--	0.0248		0.1	0.0	0.0	0.0	1.1%	0.0%
2,3,7,8-TCDD	0.065	0.26		--	0.0325		1	0.0	0.0	0.0	14.3%	0.0%
1,2,3,7,8-PeCDF	0.0452	0.1808		--	0.0226		0.05	0.0	0.0	0.0	0.5%	0.0%
2,3,4,7,8-PeCDF	0.0374	0.1496		--	0.0187		0.5	0.0	0.0	0.0	4.1%	0.0%
1,2,3,7,8-PeCDD	0.0946	0.3784		--	0.0473		1	0.0	0.0	0.0	20.9%	0.0%
1,2,3,4,7,8-HxCDF	0.0258	0.1032	0.0848	--	0.0848	0.0424	0.1	0.0	0.0	0.0	3.7%	4.5%
1,2,3,6,7,8-HxCDF	0.165	0.66		E	0.0825		0.1	0.0	0.0	0.0	3.6%	0.0%
2,3,4,6,7,8-HxCDF	0.0257	0.1028	0.122	--	0.122	0.122	0.1	0.0	0.0	0.0	5.4%	13.0%
1,2,3,7,8,9-HxCDF	0.0301	0.1204	0.529	--	0.529	0.529	0.1	0.1	0.1	0.1	23.4%	56.2%
1,2,3,4,7,8-HxCDD	0.0328	0.1312		--	0.0164		0.1	0.0	0.0	0.0	0.7%	0.0%
1,2,3,6,7,8-HxCDD	0.0267	0.1068		--	0.01335		0.1	0.0	0.0	0.0	0.6%	0.0%
1,2,3,7,8,9-HxCDD	0.0303	0.1212		--	0.01515		0.1	0.0	0.0	0.0	0.7%	0.0%
1,2,3,4,6,7,8-HpCDF	0.187	0.748		E	0.0935		0.01	0.0	0.0	0.0	0.4%	0.0%
1,2,3,4,7,8,9-HpCDF	0.0969	0.3876		E	0.04845		0.01	0.0	0.0	0.0	0.2%	0.0%
1,2,3,4,6,7,8-HpCDD	0.472	1.888		E	0.236		0.01	0.0	0.0	0.0	1.0%	0.0%
OCDF	0.0492	0.1968	0.542	--	0.542	0.542	0.0001	0.0	0.0	0.0	0.0%	0.1%
OCDD	2.16	8.64		E	1.08		0.0001	0.0	0.0	0.0	0.0%	0.0%
PCB-81	0.104	0.416	0.774	--	0.774	0.774	0.0001	0.0	0.0	0.0	0.0%	0.1%
PCB-77	0.0986	0.3944	3.88	--	3.88	3.88	0.0001	0.0	0.0	0.0	0.2%	0.4%
PCB-123	0.608	2.432	1.38	--	1.38	0.69	0.0001	0.0	0.0	0.0	0.1%	0.1%
PCB-118	0.541	2.164	61.9	J	61.9	30.95	0.0001	0.0	0.0	0.0	2.7%	3.3%
PCB-114	0.982	3.928		E	0.491		0.0005	0.0	0.0	0.0	0.1%	0.0%
PCB-105	0.602	2.408	26.4	--	26.4	26.4	0.0001	0.0	0.0	0.0	1.2%	2.8%
PCB-126	0.147	0.588	0.288	--	0.288	0.144	0.1	0.0	0.0	0.0	12.7%	15.3%
PCB-167	0.279	1.116	1.83	J	1.83	0.915	0.00001	0.0	0.0	0.0	0.0%	0.0%
PCB-156	0.287	1.148	6.46	--	6.46	6.46	0.0005	0.0	0.0	0.0	1.4%	3.4%
PCB-157	0.303	1.212	1.8	--	1.8	1.8	0.0005	0.0	0.0	0.0	0.4%	1.0%
PCB-169	0.163	0.652		E	0.0815		0.01	0.0	0.0	0.0	0.4%	0.0%
PCB-189	0.512	2.048		E	0.256		0.0001	0.0	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.2	0.1	0.0	0.0	0.2	0.1

Sample ID	GAAYMB	<i>Lab Blank</i>		Quality Control Results								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0534	0.2136		--		0.0267		0.1	0.0	0.0	1.6%	0.0%
2,3,7,8-TCDD	0.0185	0.074		--		0.00925		1	0.0	0.0	5.6%	0.0%
1,2,3,7,8-PeCDF	0.0857	0.3428		--		0.04285		0.05	0.0	0.0	1.3%	0.0%
2,3,4,7,8-PeCDF	0.067	0.268		--		0.0335		0.5	0.0	0.0	10.1%	0.0%
1,2,3,7,8-PeCDD	0.116	0.464		--		0.058		1	0.1	0.0	35.1%	0.0%
1,2,3,4,7,8-HxCDF	0.0371	0.1484		--		0.01855		0.1	0.0	0.0	1.1%	0.0%
1,2,3,6,7,8-HxCDF	0.0315	0.126	0.422	--		0.422	0.422	0.1	0.0	0.0	25.6%	81.6%
2,3,4,6,7,8-HxCDF	0.0547	0.2188		--		0.02735		0.1	0.0	0.0	1.7%	0.0%
1,2,3,7,8,9-HxCDF	0.0811	0.3244		--		0.04055		0.1	0.0	0.0	2.5%	0.0%
1,2,3,4,7,8-HxCDD	0.0179	0.0716		--		0.00895		0.1	0.0	0.0	0.5%	0.0%
1,2,3,6,7,8-HxCDD	0.0142	0.0568		--		0.0071		0.1	0.0	0.0	0.4%	0.0%
1,2,3,7,8,9-HxCDD	0.0164	0.0656		J		0.0082		0.1	0.0	0.0	0.5%	0.0%
1,2,3,4,6,7,8-HpCDF	0.0559	0.2236	0.455	--		0.455	0.455	0.01	0.0	0.0	2.8%	8.8%
1,2,3,4,7,8,9-HpCDF	0.133	0.532		--		0.0665		0.01	0.0	0.0	0.4%	0.0%
1,2,3,4,6,7,8-HpCDD	0.685	2.74		E		0.3425		0.01	0.0	0.0	2.1%	0.0%
OCDF	1.56	6.24		E		0.78		0.0001	0.0	0.0	0.0%	0.0%
OCDD	4.07	16.28		E		2.035		0.0001	0.0	0.0	0.1%	0.0%
PCB-81	0.108	0.432	0.896	--		0.896	0.896	0.0001	0.0	0.0	0.1%	0.2%
PCB-77	0.0853	0.3412	2.71	--		2.71	2.71	0.0001	0.0	0.0	0.2%	0.5%
PCB-123	0.5	2	0.776	--		0.776	0.388	0.0001	0.0	0.0	0.0%	0.1%
PCB-118	0.44	1.76	25.9	J		25.9	12.95	0.0001	0.0	0.0	1.6%	2.5%
PCB-114	0.436	1.744	1.08	--		1.08	0.54	0.0005	0.0	0.0	0.3%	0.5%
PCB-105	0.417	1.668	11.5	--		11.5	11.5	0.0001	0.0	0.0	0.7%	2.2%
PCB-126	0.133	0.532		--		0.0665		0.1	0.0	0.0	4.0%	0.0%
PCB-167	0.424	1.696	1.59	--		1.59	0.795	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.417	1.668	3.17	--		3.17	3.17	0.0005	0.0	0.0	1.0%	3.1%
PCB-157	0.431	1.724	1.11	--		1.11	0.555	0.0005	0.0	0.0	0.3%	0.5%
PCB-169	0.124	0.496		--		0.062		0.01	0.0	0.0	0.4%	0.0%
PCB-189	0.207	0.828		--		0.1035		0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
0.2	0.0	0.0	0.0	0.2	0.1

Sample ID	GAAXLCS	<i>Lab Spike</i>										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0518	0.2072	19.1	--		19.1	19.1	0.1	1.9	1.9	0.8%	0.8%
2,3,7,8-TCDD	0.049	0.196	16.7	--		16.7	16.7	1	16.7	16.7	6.7%	6.7%
1,2,3,7,8-PeCDF	0.0708	0.2832	106	--		106	106	0.05	5.3	5.3	2.1%	2.1%
2,3,4,7,8-PeCDF	0.0518	0.2072	94.3	--		94.3	94.3	0.5	47.2	47.2	18.8%	18.8%
1,2,3,7,8-PeCDD	0.0658	0.2632	93.4	--		93.4	93.4	1	93.4	93.4	37.3%	37.3%
1,2,3,4,7,8-HxCDF	0.0437	0.1748	91.5	--		91.5	91.5	0.1	9.2	9.2	3.7%	3.7%
1,2,3,6,7,8-HxCDF	0.0381	0.1524	79.8	--		79.8	79.8	0.1	8.0	8.0	3.2%	3.2%
2,3,4,6,7,8-HxCDF	0.0429	0.1716	88.1	--		88.1	88.1	0.1	8.8	8.8	3.5%	3.5%
1,2,3,7,8,9-HxCDF	0.0494	0.1976	84.1	--		84.1	84.1	0.1	8.4	8.4	3.4%	3.4%
1,2,3,4,7,8-HxCDD	0.0101	0.0404	92.2	--		92.2	92.2	0.1	9.2	9.2	3.7%	3.7%
1,2,3,6,7,8-HxCDD	0.00864	0.0346	85	--		85	85	0.1	8.5	8.5	3.4%	3.4%
1,2,3,7,8,9-HxCDD	0.00963	0.0385	91.6	--		91.6	91.6	0.1	9.2	9.2	3.7%	3.7%
1,2,3,4,6,7,8-HpCDF	0.0624	0.2496	76.3	--		76.3	76.3	0.01	0.8	0.8	0.3%	0.3%
1,2,3,4,7,8,9-HpCDF	0.0843	0.3372	97	--		97	97	0.01	1.0	1.0	0.4%	0.4%
1,2,3,4,6,7,8-HpCDD	0.0101	0.0404	96	--		96	96	0.01	1.0	1.0	0.4%	0.4%
OCDF	0.0263	0.1052	188	--		188	188	0.0001	0.0	0.0	0.0%	0.0%
OCDD	0.00166	0.0066	191	--		191	191	0.0001	0.0	0.0	0.0%	0.0%
PCB-81	0.169	0.676	204	--		204	204	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.123	0.492	195	--		195	195	0.0001	0.0	0.0	0.0%	0.0%
PCB-123	0.846	3.384	232	--		232	232	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.752	3.008	288	J	<5*B	288	144	0.0001	0.0	0.0	0.0%	0.0%
PCB-114	0.86	3.44	225	--		225	225	0.0005	0.1	0.1	0.0%	0.0%
PCB-105	0.866	3.464	246	--		246	246	0.0001	0.0	0.0	0.0%	0.0%
PCB-126	0.183	0.732	194	--		194	194	0.1	19.4	19.4	7.8%	7.8%
PCB-167	0.264	1.056	252	J		252	126	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.271	1.084	209	--		209	209	0.0005	0.1	0.1	0.0%	0.0%
PCB-157	0.286	1.144	222	--		222	222	0.0005	0.1	0.1	0.0%	0.0%
PCB-169	0.0812	0.3248	198	--		198	198	0.01	2.0	2.0	0.8%	0.8%
PCB-189	0.136	0.544	211	--		211	211	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
228.4	228.4	21.8	21.8	250.3	250.3

Sample ID	GAAYLCS	<i>Lab Spike</i>

Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0384	0.1536	16.9	--		16.9	16.9	0.1	1.7	1.7	0.6%	0.6%
2,3,7,8-TCDD	0.0401	0.1604	17.1	--		17.1	17.1	1	17.1	17.1	6.5%	6.6%
1,2,3,7,8-PeCDF	0.0475	0.19	107	--		107	107	0.05	5.4	5.4	2.0%	2.1%
2,3,4,7,8-PeCDF	0.0319	0.1276	90.4	--		90.4	90.4	0.5	45.2	45.2	17.1%	17.3%
1,2,3,7,8-PeCDD	0.0709	0.2836	108	--		108	108	1	108.0	108.0	41.0%	41.4%
1,2,3,4,7,8-HxCDF	0.0125	0.05	91.9	--		91.9	91.9	0.1	9.2	9.2	3.5%	3.5%
1,2,3,6,7,8-HxCDF	0.0107	0.0428	80.8	--		80.8	80.8	0.1	8.1	8.1	3.1%	3.1%
2,3,4,6,7,8-HxCDF	0.014	0.056	88.4	--		88.4	88.4	0.1	8.8	8.8	3.4%	3.4%
1,2,3,7,8,9-HxCDF	0.0199	0.0796	86.3	--		86.3	86.3	0.1	8.6	8.6	3.3%	3.3%
1,2,3,4,7,8-HxCDD	0.00778	0.0311	111	--		111	111	0.1	11.1	11.1	4.2%	4.3%
1,2,3,6,7,8-HxCDD	0.0056	0.0224	76.8	--		76.8	76.8	0.1	7.7	7.7	2.9%	2.9%
1,2,3,7,8,9-HxCDD	0.00667	0.0267	62	J		62	31	0.1	6.2	3.1	2.4%	1.2%
1,2,3,4,6,7,8-HpCDF	0.0805	0.322	80.6	--		80.6	80.6	0.01	0.8	0.8	0.3%	0.3%
1,2,3,4,7,8,9-HpCDF	0.163	0.652	99.2	--		99.2	99.2	0.01	1.0	1.0	0.4%	0.4%
1,2,3,4,6,7,8-HpCDD	0.00539	0.0216	94.5	--		94.5	94.5	0.01	0.9	0.9	0.4%	0.4%
OCDF	0.0185	0.074	232	--		232	232	0.0001	0.0	0.0	0.0%	0.0%
OCDD	0.00701	0.0280	186	--		186	186	0.0001	0.0	0.0	0.0%	0.0%
PCB-81	0.0907	0.3628	218	--		218	218	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.064	0.256	213	--		213	213	0.0001	0.0	0.0	0.0%	0.0%
PCB-123	1.57	6.28	233	--		233	233	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	1.38	5.52	258	J		258	129	0.0001	0.0	0.0	0.0%	0.0%
PCB-114	1.28	5.12	217	--		217	217	0.0005	0.1	0.1	0.0%	0.0%
PCB-105	1.23	4.92	237	--		237	237	0.0001	0.0	0.0	0.0%	0.0%
PCB-126	0.18	0.72	213	--		213	213	0.1	21.3	21.3	8.1%	8.2%
PCB-167	0.832	3.328	212	--		212	212	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.818	3.272	211	--		211	211	0.0005	0.1	0.1	0.0%	0.0%
PCB-157	0.846	3.384	217	--		217	217	0.0005	0.1	0.1	0.0%	0.0%
PCB-169	0.0912	0.3648	213	--		213	213	0.01	2.1	2.1	0.8%	0.8%
PCB-189	0.174	0.696	209	--		209	209	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
239.8	236.7	23.9	23.9	263.7	260.6

Sample ID	172	PE Clean	Ref-F-23										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.0008	0.0032		--	0.000399		0.1	0.0	0.0	0.0	0.0%	0.0%	
2,3,7,8-TCDD	0.00265	0.0106		--	0.001325		1	0.0	0.0	0.0	0.0%	0.0%	
1,2,3,7,8-PeCDF	0.00633	0.0253		--	0.003165		0.05	0.0	0.0	0.0	0.0%	0.0%	
2,3,4,7,8-PeCDF	0.115	0.46		E	0.0575		0.5	0.0	0.0	0.0	1.0%	0.0%	
1,2,3,7,8-PeCDD	0.003	0.012	0.513	--	0.513	0.513	1	0.5	0.5	0.5	17.4%	18.1%	
1,2,3,4,7,8-HxCDF	0.0959	0.3836	0.516	--	0.516	0.516	0.1	0.1	0.1	0.1	1.7%	1.8%	
1,2,3,6,7,8-HxCDF	0.075	0.3	0.414	--	0.414	0.414	0.1	0.0	0.0	0.0	1.4%	1.5%	
2,3,4,6,7,8-HxCDF	0.0918	0.3672	1.07	--	1.07	1.07	0.1	0.1	0.1	0.1	3.6%	3.8%	
1,2,3,7,8,9-HxCDF	0.316	1.264		E	<5*B	0.158		0.1	0.0	0.0	0.5%	0.0%	
1,2,3,4,7,8-HxCDD	0.00078	0.0031	0.942	--	0.942	0.942	0.1	0.1	0.1	0.1	3.2%	3.3%	
1,2,3,6,7,8-HxCDD	0.00083	0.0033	2.39	--	2.39	2.39	0.1	0.2	0.2	0.2	8.1%	8.4%	
1,2,3,7,8,9-HxCDD	0.00084	0.0034	1.07	--	1.07	1.07	0.1	0.1	0.1	0.1	3.6%	3.8%	
1,2,3,4,6,7,8-HpCDF	0.0501	0.2004	9.53	--	9.53	9.53	0.01	0.1	0.1	0.1	3.2%	3.4%	
1,2,3,4,7,8,9-HpCDF	0.878	3.512		E	0.439		0.01	0.0	0.0	0.0	0.1%	0.0%	
1,2,3,4,6,7,8-HpCDD	0.111	0.444	137	--	137	137	0.01	1.4	1.4	1.4	46.4%	48.4%	
OCDF	0.00802	0.0321	41.1	--	41.1	41.1	0.0001	0.0	0.0	0.0	0.1%	0.1%	
OCDD	0.0166	0.0664	1360	C	1360	1360	0.0001	0.1	0.1	0.1	4.6%	4.8%	
PCB-81	0.109	0.436	0.48	B	<5*B	0.48	0.24	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.0942	0.3768	3.5	B	<5*B	3.5	1.75	0.0001	0.0	0.0	0.0%	0.0%	
PCB-123	0.183	0.732	4.89	B	<5*B	4.89	2.445	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.163	0.652	198	BJ	<5*B	198	99	0.0001	0.0	0.0	0.7%	0.3%	
PCB-114	0.188	0.752	4.34	--	4.34	4.34	0.0005	0.0	0.0	0.0	0.1%	0.1%	
PCB-105	0.189	0.756	89	B	<5*B	89	44.5	0.0001	0.0	0.0	0.3%	0.2%	
PCB-126	0.107	0.428	0.908	B	<5*B	0.908	0.454	0.1	0.1	0.0	3.1%	1.6%	
PCB-167	0.126	0.504	9.12	BJ	<5*B	9.12	4.56	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.13	0.52	32.1	B	<5*B	32.1	16.05	0.0005	0.0	0.0	0.5%	0.3%	
PCB-157	0.137	0.548	7.88	B	<5*B	7.88	3.94	0.0005	0.0	0.0	0.1%	0.1%	
PCB-169	0.0475	0.19		--	0.02375		0.01	0.0	0.0	0.0	0.0%	0.0%	
PCB-189	0.217	0.868	2.24	--	2.24	2.24	0.0001	0.0	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
2.8	2.8	0.1	0.1	3.0	2.8

Sample ID	256	PE Clean	Ref-F-24										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.0108	0.0432	0.129	NJ		0.0645	0	0.1	0.0	0.0	0.5%	0.0%	
2,3,7,8-TCDD	0.00188	0.0075		--		0.00094		1	0.0	0.0	0.1%	0.0%	
1,2,3,7,8-PeCDF	0.179	0.716		E		0.0895		0.05	0.0	0.0	0.4%	0.0%	
2,3,4,7,8-PeCDF	0.209	0.836		E		0.1045		0.5	0.1	0.0	4.4%	0.0%	
1,2,3,7,8-PeCDD	0.0421	0.1684		--		0.02105		1	0.0	0.0	1.8%	0.0%	
1,2,3,4,7,8-HxCDF	0.042	0.168	0.513	--		0.513	0.513	0.1	0.1	0.1	4.3%	5.1%	
1,2,3,6,7,8-HxCDF	0.387	1.548		E		0.1935		0.1	0.0	0.0	1.6%	0.0%	
2,3,4,6,7,8-HxCDF	0.0434	0.1736		--		0.0217		0.1	0.0	0.0	0.2%	0.0%	
1,2,3,7,8,9-HxCDF	0.0481	0.1924	0.369	--		0.369	0.369	0.1	0.0	0.0	3.1%	3.7%	
1,2,3,4,7,8-HxCDD	0.0109	0.0436	0.999	--		0.999	0.999	0.1	0.1	0.1	8.4%	9.9%	
1,2,3,6,7,8-HxCDD	0.00824	0.033	1.67	--		1.67	1.67	0.1	0.2	0.2	14.1%	16.6%	
1,2,3,7,8,9-HxCDD	0.00965	0.0386	1.18	J		1.18	0.59	0.1	0.1	0.1	10.0%	5.8%	
1,2,3,4,6,7,8-HpCDF	0.0259	0.1036	5.76	--		5.76	5.76	0.01	0.1	0.1	4.9%	5.7%	
1,2,3,4,7,8,9-HpCDF	0.0384	0.1536	0.51	--		0.51	0.51	0.01	0.0	0.0	0.4%	0.5%	
1,2,3,4,6,7,8-HpCDD	0.0376	0.1504	38.3	--		38.3	38.3	0.01	0.4	0.4	32.3%	38.0%	
OCDF	0.0137	0.0548	8.95	--		8.95	8.95	0.0001	0.0	0.0	0.1%	0.1%	
OCDD	0.0154	0.0616	291	--		291	291	0.0001	0.0	0.0	2.5%	2.9%	
PCB-81	0.0532	0.2128	0.499	B		0.499	0.2495	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.0433	0.1732	4.24	B		4.24	2.12	0.0001	0.0	0.0	0.0%	0.0%	
PCB-123	0.373	1.492	3.7	B		3.7	1.85	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	0.328	1.312	163	J		163	81.5	0.0001	0.0	0.0	1.4%	0.8%	
PCB-114	0.311	1.244	4.35	B		4.35	2.175	0.0005	0.0	0.0	0.2%	0.1%	
PCB-105	0.298	1.192	77.5	--		77.5	77.5	0.0001	0.0	0.0	0.7%	0.8%	
PCB-126	0.0986	0.3944	0.837	--		0.837	0.837	0.1	0.1	0.1	7.1%	8.3%	
PCB-167	0.154	0.616	10.9	--		10.9	10.9	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	0.151	0.604	25.4	--		25.4	25.4	0.0005	0.0	0.0	1.1%	1.3%	
PCB-157	0.156	0.624	6.78	--		6.78	6.78	0.0005	0.0	0.0	0.3%	0.3%	
PCB-169	0.0411	0.1644	0.172	--		0.172	0.172	0.01	0.0	0.0	0.1%	0.2%	
PCB-189	0.227	0.908	1.88	--		1.88	1.88	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.1	0.9	0.1	0.1	1.2	1.0

Sample ID	263	PE Low Std	PEL-F-11									
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.00134	0.0054	3.84	NJ		1.92	0	0.1	0.2	0.0	0.3%	0.0%
2,3,7,8-TCDD	0.00329	0.0132	10.8	--		10.8	10.8	1	10.8	10.8	15.7%	15.7%
1,2,3,7,8-PeCDF	0.0114	0.0456	106	--		106	106	0.05	5.3	5.3	7.7%	7.7%
2,3,4,7,8-PeCDF	0.00749	0.03	27.4	--		27.4	27.4	0.5	13.7	13.7	19.9%	20.0%
1,2,3,7,8-PeCDD	0.003	0.012	18	--		18	18	1	18.0	18.0	26.1%	26.2%
1,2,3,4,7,8-HxCDF	0.0573	0.2292	27.9	--		27.9	27.9	0.1	2.8	2.8	4.1%	4.1%
1,2,3,6,7,8-HxCDF	0.0488	0.1952	1.88	--		1.88	1.88	0.1	0.2	0.2	0.3%	0.3%
2,3,4,6,7,8-HxCDF	0.0503	0.2012	65.7	--		65.7	65.7	0.1	6.6	6.6	9.5%	9.6%
1,2,3,7,8,9-HxCDF	0.0655	0.262	62	--		62	62	0.1	6.2	6.2	9.0%	9.0%
1,2,3,4,7,8-HxCDD	0.0015	0.006	9.96	--		9.96	9.96	0.1	1.0	1.0	1.4%	1.5%
1,2,3,6,7,8-HxCDD	0.00171	0.0068	13.7	--		13.7	13.7	0.1	1.4	1.4	2.0%	2.0%
1,2,3,7,8,9-HxCDD	0.00168	0.0067	2.35	--		2.35	2.35	0.1	0.2	0.2	0.3%	0.3%
1,2,3,4,6,7,8-HpCDF	0.0324	0.1296	6.66	--		6.66	6.66	0.01	0.1	0.1	0.1%	0.1%
1,2,3,4,7,8,9-HpCDF	0.0687	0.2748	70.9	--		70.9	70.9	0.01	0.7	0.7	1.0%	1.0%
1,2,3,4,6,7,8-HpCDD	0.0618	0.2472	99.4	--		99.4	99.4	0.01	1.0	1.0	1.4%	1.4%
OCDF	0.0145	0.058	25.9	--		25.9	25.9	0.0001	0.0	0.0	0.0%	0.0%
OCDD	0.00527	0.0211	375	--		375	375	0.0001	0.0	0.0	0.1%	0.1%
PCB-81	0.0578	0.2312	0.85	B	<5*B	0.85	0.425	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0538	0.2152	15.9	B	<5*B	15.9	7.95	0.0001	0.0	0.0	0.0%	0.0%
PCB-123	1.05	4.2	22.5	--		22.5	22.5	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.933	3.732	1190	CJ		1190	595	0.0001	0.1	0.1	0.2%	0.1%
PCB-114	1.12	4.48	30.1	--		30.1	30.1	0.0005	0.0	0.0	0.0%	0.0%
PCB-105	1.12	4.48	615	C		615	615	0.0001	0.1	0.1	0.1%	0.1%
PCB-126	0.189	0.756	3.62	--		3.62	3.62	0.1	0.4	0.4	0.5%	0.5%
PCB-167	0.266	1.064	51.5	J		51.5	25.75	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.274	1.096	180	--		180	180	0.0005	0.1	0.1	0.1%	0.1%
PCB-157	0.289	1.156	46.8	--		46.8	46.8	0.0005	0.0	0.0	0.0%	0.0%
PCB-169	1.49	5.96	E			0.745		0.01	0.0	0.0	0.0%	0.0%
PCB-189	0.0911	0.3644	7.72	--		7.72	7.72	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
68.2	68.0	0.7	0.6	68.8	68.6

Sample ID	498	PE Low Std	PEL-F-12
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Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.055	0.22	3.82	NJ		1.91	0	0.1	0.2	0.0	0.3%	0.0%
2,3,7,8-TCDD	0.023	0.092	10.6	--		10.6	10.6	1	10.6	10.6	14.8%	14.9%
1,2,3,7,8-PeCDF	0.0696	0.2784	107	--		107	107	0.05	5.4	5.4	7.5%	7.5%
2,3,4,7,8-PeCDF	0.0558	0.2232	30.1	--		30.1	30.1	0.5	15.1	15.1	21.1%	21.2%
1,2,3,7,8-PeCDD	0.0155	0.062	18.5	--		18.5	18.5	1	18.5	18.5	25.9%	26.0%
1,2,3,4,7,8-HxCDF	0.0407	0.1628	29.3	--		29.3	29.3	0.1	2.9	2.9	4.1%	4.1%
1,2,3,6,7,8-HxCDF	0.0397	0.1588	1.85	B		1.85	0.925	0.1	0.2	0.1	0.3%	0.1%
2,3,4,6,7,8-HxCDF	0.0571	0.2284	72.3	--		72.3	72.3	0.1	7.2	7.2	10.1%	10.2%
1,2,3,7,8,9-HxCDF	0.101	0.404	62.9	--		62.9	62.9	0.1	6.3	6.3	8.8%	8.9%
1,2,3,4,7,8-HxCDD	0.0416	0.1664	10.4	--		10.4	10.4	0.1	1.0	1.0	1.5%	1.5%
1,2,3,6,7,8-HxCDD	0.0349	0.1396	14.5	--		14.5	14.5	0.1	1.5	1.5	2.0%	2.0%
1,2,3,7,8,9-HxCDD	0.0394	0.1576	1.65	J		1.65	0.825	0.1	0.2	0.1	0.2%	0.1%
1,2,3,4,6,7,8-HpCDF	0.0994	0.3976	10.3	--		10.3	10.3	0.01	0.1	0.1	0.1%	0.1%
1,2,3,4,7,8,9-HpCDF	0.241	0.964	65.2	--		65.2	65.2	0.01	0.7	0.7	0.9%	0.9%
1,2,3,4,6,7,8-HpCDD	0.0729	0.2916	98	--		98	98	0.01	1.0	1.0	1.4%	1.4%
OCDF	0.13	0.52	41	--		41	41	0.0001	0.0	0.0	0.0%	0.0%
OCDD	0.129	0.516	485	--		485	485	0.0001	0.0	0.0	0.1%	0.1%
PCB-81	0.0605	0.242	0.859	B		0.859	0.4295	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0535	0.214	16.2	--		16.2	16.2	0.0001	0.0	0.0	0.0%	0.0%
PCB-123	2.65	10.6	18.7	--		18.7	18.7	0.0001	0.0	0.0	0.0%	0.0%
PCB-118	2.33	9.32	1330	CJ		1330	665	0.0001	0.1	0.1	0.2%	0.1%
PCB-114	2.04	8.16	32.4	--		32.4	32.4	0.0005	0.0	0.0	0.0%	0.0%
PCB-105	1.96	7.84	636	C		636	636	0.0001	0.1	0.1	0.1%	0.1%
PCB-126	0.485	1.94	3.54	--		3.54	3.54	0.1	0.4	0.4	0.5%	0.5%
PCB-167	0.23	0.92	62.7	--		62.7	62.7	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.226	0.904	188	--		188	188	0.0005	0.1	0.1	0.1%	0.1%
PCB-157	0.234	0.936	42.2	--		42.2	42.2	0.0005	0.0	0.0	0.0%	0.0%
PCB-169	1.07	4.28		E		0.535		0.01	0.0	0.0	0.0%	0.0%
PCB-189	0.119	0.476	7.85	--		7.85	7.85	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
70.8	70.4	0.7	0.6	71.5	71.0

Sample ID	351	PE Med Std	PEM-F-12										
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ		
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant	
2,3,7,8-TCDF	0.0316	0.1264	6.72	NJ		3.36	0	0.1	0.3	0.0	0.2%	0.0%	
2,3,7,8-TCDD	0.0212	0.0848	58.9	--		58.9	58.9	1	58.9	58.9	42.7%	44.1%	
1,2,3,7,8-PeCDF	0.0258	0.1032	44.6	--		44.6	44.6	0.05	2.2	2.2	1.6%	1.7%	
2,3,4,7,8-PeCDF	0.0202	0.0808	1.05	--		1.05	1.05	0.5	0.5	0.5	0.4%	0.4%	
1,2,3,7,8-PeCDD	0.00315	0.0126	43.7	--		43.7	43.7	1	43.7	43.7	31.7%	32.7%	
1,2,3,4,7,8-HxCDF	0.0771	0.3084	44	--		44	44	0.1	4.4	4.4	3.2%	3.3%	
1,2,3,6,7,8-HxCDF	0.0687	0.2748	1.84	B		1.84	0.92	0.1	0.2	0.1	0.1%	0.1%	
2,3,4,6,7,8-HxCDF	0.0882	0.3528	35.1	--		35.1	35.1	0.1	3.5	3.5	2.5%	2.6%	
1,2,3,7,8,9-HxCDF	0.121	0.484	9.08	--		9.08	9.08	0.1	0.9	0.9	0.7%	0.7%	
1,2,3,4,7,8-HxCDD	0.0265	0.106	38.1	--		38.1	38.1	0.1	3.8	3.8	2.8%	2.9%	
1,2,3,6,7,8-HxCDD	0.0235	0.094	3.28	--		3.28	3.28	0.1	0.3	0.3	0.2%	0.2%	
1,2,3,7,8,9-HxCDD	0.026	0.104	57.1	J		57.1	28.55	0.1	5.7	2.9	4.1%	2.1%	
1,2,3,4,6,7,8-HpCDF	0.0834	0.3336	50.2	--		50.2	50.2	0.01	0.5	0.5	0.4%	0.4%	
1,2,3,4,7,8,9-HpCDF	0.157	0.628	31.2	--		31.2	31.2	0.01	0.3	0.3	0.2%	0.2%	
1,2,3,4,6,7,8-HpCDD	0.096	0.384	57.1	--		57.1	57.1	0.01	0.6	0.6	0.4%	0.4%	
OCDF	0.0519	0.2076	174	--		174	174	0.0001	0.0	0.0	0.0%	0.0%	
OCDD	0.049	0.196	492	--		492	492	0.0001	0.0	0.0	0.0%	0.0%	
PCB-81	0.116	0.464	8.66	--		8.66	8.66	0.0001	0.0	0.0	0.0%	0.0%	
PCB-77	0.0851	0.3404	210	--		210	210	0.0001	0.0	0.0	0.0%	0.0%	
PCB-123	72.2	288.8	451	--		451	451	0.0001	0.0	0.0	0.0%	0.0%	
PCB-118	63.5	254	19000	SJ		19000	9500	0.0001	1.9	1.0	1.4%	0.7%	
PCB-114	56.4	225.6	692	C		692	692	0.0005	0.3	0.3	0.3%	0.3%	
PCB-105	53.9	215.6	11600	C		11600	11600	0.0001	1.2	1.2	0.8%	0.9%	
PCB-126	4.31	17.24	65.2	--		65.2	65.2	0.1	6.5	6.5	4.7%	4.9%	
PCB-167	1.15	4.6	1140	C		1140	1140	0.00001	0.0	0.0	0.0%	0.0%	
PCB-156	1.13	4.52	2990	C		2990	2990	0.0005	1.5	1.5	1.1%	1.1%	
PCB-157	1.17	4.68	687	C		687	687	0.0005	0.3	0.3	0.2%	0.3%	
PCB-169	10.1	40.4		E		5.05		0.01	0.1	0.0	0.0%	0.0%	
PCB-189	0.279	1.116	126	--		126	126	0.0001	0.0	0.0	0.0%	0.0%	

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
126.0	122.7	11.9	10.9	137.9	133.6

Sample ID	688	PE Med Std	PEM-F-11
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Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0199	0.0796	6.24	NJ		3.12	0	0.1	0.3	0.0	0.2%	0.0%
2,3,7,8-TCDD	0.00962	0.0385	51.4	--		51.4	51.4	1	51.4	51.4	40.9%	41.2%
1,2,3,7,8-PeCDF	0.00192	0.0077	41.4	--		41.4	41.4	0.05	2.1	2.1	1.6%	1.7%
2,3,4,7,8-PeCDF	0.00144	0.0058	0.955	--		0.955	0.955	0.5	0.5	0.5	0.4%	0.4%
1,2,3,7,8-PeCDD	0.00154	0.0062	40.2	--		40.2	40.2	1	40.2	40.2	32.0%	32.2%
1,2,3,4,7,8-HxCDF	0.0487	0.1948	40.4	--		40.4	40.4	0.1	4.0	4.0	3.2%	3.2%
1,2,3,6,7,8-HxCDF	0.0429	0.1716	1.63	--		1.63	1.63	0.1	0.2	0.2	0.1%	0.1%
2,3,4,6,7,8-HxCDF	0.0513	0.2052	30.2	--		30.2	30.2	0.1	3.0	3.0	2.4%	2.4%
1,2,3,7,8,9-HxCDF	0.0509	0.2036	8.74	--		8.74	8.74	0.1	0.9	0.9	0.7%	0.7%
1,2,3,4,7,8-HxCDD	0.0173	0.0692	38.8	--		38.8	38.8	0.1	3.9	3.9	3.1%	3.1%
1,2,3,6,7,8-HxCDD	0.0171	0.0684	3.02	--		3.02	3.02	0.1	0.3	0.3	0.2%	0.2%
1,2,3,7,8,9-HxCDD	0.0179	0.0716	73.7	--		73.7	73.7	0.1	7.4	7.4	5.9%	5.9%
1,2,3,4,6,7,8-HpCDF	0.0649	0.2596	49.8	--		49.8	49.8	0.01	0.5	0.5	0.4%	0.4%
1,2,3,4,7,8,9-HpCDF	0.0783	0.3132	29.3	--		29.3	29.3	0.01	0.3	0.3	0.2%	0.2%
1,2,3,4,6,7,8-HpCDD	0.0488	0.1952	49.7	--		49.7	49.7	0.01	0.5	0.5	0.4%	0.4%
OCDF	0.0186	0.0744	142	--		142	142	0.0001	0.0	0.0	0.0%	0.0%
OCDD	0.0178	0.0712	449	--		449	449	0.0001	0.0	0.0	0.0%	0.0%
PCB-81	0.206	0.824	8.07	--		8.07	8.07	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.181	0.724	202	--		202	202	0.0001	0.0	0.0	0.0%	0.0%
PCB-123	119	476	516	C		516	516	0.0001	0.1	0.1	0.0%	0.0%
PCB-118	106	424	11100	SJ		11100	5550	0.0001	1.1	0.6	0.9%	0.4%
PCB-114	112	448	606	C		606	606	0.0005	0.3	0.3	0.2%	0.2%
PCB-105	112	448	9070	S		9070	9070	0.0001	0.9	0.9	0.7%	0.7%
PCB-126	0.369	1.476	60.1	--		60.1	60.1	0.1	6.0	6.0	4.8%	4.8%
PCB-167	1.02	4.08	924	CJ		924	462	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	1.05	4.2	2800	C		2800	2800	0.0005	1.4	1.4	1.1%	1.1%
PCB-157	1.11	4.44	630	C		630	630	0.0005	0.3	0.3	0.3%	0.3%
PCB-169	9.63	38.52	E			4.815		0.01	0.0	0.0	0.0%	0.0%
PCB-189	0.2	0.8	115	--		115	115	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
115.5	115.1	10.2	9.6	125.6	124.7

Sample ID 333 Split

Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0438	0.1752	1.52	U_NJ		1.52	0.76	0.1	0.2	0.1	2.0%	1.0%
2,3,7,8-TCDD	0.0336	0.1344	--		0.0168			1	0.0	0.0	0.2%	0.0%
1,2,3,7,8-PeCDF	0.0326	0.1304	11.3	--		11.3	11.3	0.05	0.6	0.6	7.4%	7.6%
2,3,4,7,8-PeCDF	0.0252	0.1008	1.92	--		1.92	1.92	0.5	1.0	1.0	12.5%	12.9%
1,2,3,7,8-PeCDD	0.0244	0.0976	0.497	--		0.497	0.497	1	0.5	0.5	6.5%	6.7%
1,2,3,4,7,8-HxCDF	0.024	0.096	19.1	--		19.1	19.1	0.1	1.9	1.9	24.8%	25.6%
1,2,3,6,7,8-HxCDF	0.0207	0.0828	8.84	--		8.84	8.84	0.1	0.9	0.9	11.5%	11.8%
2,3,4,6,7,8-HxCDF	0.0227	0.0908	4.21	--		4.21	4.21	0.1	0.4	0.4	5.5%	5.6%
1,2,3,7,8,9-HxCDF	0.0254	0.1016	4.77	--		4.77	4.77	0.1	0.5	0.5	6.2%	6.4%
1,2,3,4,7,8-HxCDD	0.66	2.64	E			0.33		0.1	0.0	0.0	0.4%	0.0%
1,2,3,6,7,8-HxCDD	0.0544	0.2176	1.05	--		1.05	1.05	0.1	0.1	0.1	1.4%	1.4%
1,2,3,7,8,9-HxCDD	1.21	4.84	E			0.605		0.1	0.1	0.0	0.8%	0.0%
1,2,3,4,6,7,8-HpCDF	0.032	0.128	49.7	--		49.7	49.7	0.01	0.5	0.5	6.5%	6.7%
1,2,3,4,7,8,9-HpCDF	0.0406	0.1624	21.4	--		21.4	21.4	0.01	0.2	0.2	2.8%	2.9%
1,2,3,4,6,7,8-HpCDD	0.086	0.344	15.9	--	<5*B	15.9	15.9	0.01	0.2	0.2	2.1%	2.1%
OCDF	0.014	0.056	333	--		333	333	0.0001	0.0	0.0	0.4%	0.4%
OCDD	0.0341	0.1364	127	--		127	127	0.0001	0.0	0.0	0.2%	0.2%
PCB-81	0.13	0.52	1.41	B	<5*B	1.41	0.705	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.133	0.532	23.8	--	<5*B	23.8	23.8	0.0001	0.0	0.0	0.0%	0.0%
PCB-123	0.469	1.876	--		0.2345			0.0001	0.0	0.0	0.0%	0.0%
PCB-118	0.417	1.668	629	CJ		629	314.5	0.0001	0.1	0.0	0.8%	0.4%
PCB-114	0.565	2.26	18.3	--		18.3	18.3	0.0005	0.0	0.0	0.1%	0.1%
PCB-105	0.569	2.276	290	--		290	290	0.0001	0.0	0.0	0.4%	0.4%
PCB-126	0.393	1.572	5.09	--	<5*B	5.09	5.09	0.1	0.5	0.5	6.6%	6.8%
PCB-167	0.524	2.096	46.2	--		46.2	46.2	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.54	2.16	104	--		104	104	0.0005	0.1	0.1	0.7%	0.7%
PCB-157	0.569	2.276	26.3	--		26.3	26.3	0.0005	0.0	0.0	0.2%	0.2%
PCB-169	0.0474	0.1896	1.03	--	<5*B	1.03	1.03	0.01	0.0	0.0	0.1%	0.1%
PCB-189	12.8	51.2	E	<5*B		6.4		0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
7.0	6.8	0.7	0.7	7.7	7.5

Sample ID	743	Split		split 234								
Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.0624	0.2496	0.337	NJ		0.1685	0	0.1	0.0	0.0	1.3%	0.0%
2,3,7,8-TCDD	1.15	4.6		E		0.575		1	0.6	0.0	43.0%	0.0%
1,2,3,7,8-PeCDF	0.644	2.576		E		0.322		0.05	0.0	0.0	1.2%	0.0%
2,3,4,7,8-PeCDF	0.36	1.44		E		0.18		0.5	0.1	0.0	6.7%	0.0%
1,2,3,7,8-PeCDD	0.0527	0.2108		--		0.02635		1	0.0	0.0	2.0%	0.0%
1,2,3,4,7,8-HxCDF	1.07	4.28		E		0.535		0.1	0.1	0.0	4.0%	0.0%
1,2,3,6,7,8-HxCDF	0.0337	0.1348	0.566	B		0.566	0.283	0.1	0.1	0.0	4.2%	6.4%
2,3,4,6,7,8-HxCDF	0.528	2.112		E		0.264		0.1	0.0	0.0	2.0%	0.0%
1,2,3,7,8,9-HxCDF	0.0562	0.2248	0.472	--		0.472	0.472	0.1	0.0	0.0	3.5%	10.7%
1,2,3,4,7,8-HxCDD	0.309	1.236		E		0.1545		0.1	0.0	0.0	1.2%	0.0%
1,2,3,6,7,8-HxCDD	0.0142	0.0568	0.424	--		0.424	0.424	0.1	0.0	0.0	3.2%	9.7%
1,2,3,7,8,9-HxCDD	0.24	0.96		EJ		0.12		0.1	0.0	0.0	0.9%	0.0%
1,2,3,4,6,7,8-HpCDF	0.031	0.124	3.99	--		3.99	3.99	0.01	0.0	0.0	3.0%	9.1%
1,2,3,4,7,8,9-HpCDF	0.0533	0.2132	1.28	--		1.28	1.28	0.01	0.0	0.0	1.0%	2.9%
1,2,3,4,6,7,8-HpCDD	7.71	30.84		E		3.855		0.01	0.0	0.0	2.9%	0.0%
OCDF	0.0478	0.1912	21.6	--		21.6	21.6	0.0001	0.0	0.0	0.2%	0.5%
OCDD	0.055	0.22	63.8	--		63.8	63.8	0.0001	0.0	0.0	0.5%	1.5%
PCB-81	0.0796	0.3184	1.2	B		1.2	0.6	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0613	0.2452	7.62	B		7.62	3.81	0.0001	0.0	0.0	0.1%	0.1%
PCB-123				--				0.0001	0.0	0.0	0.0%	0.0%
PCB-118				--				0.0001	0.0	0.0	0.0%	0.0%
PCB-114				--				0.0005	0.0	0.0	0.0%	0.0%
PCB-105				--				0.0001	0.0	0.0	0.0%	0.0%
PCB-126	0.252	1.008	2.51	--	2.51	2.51	0.1	0.3	0.3	0.3	18.8%	57.1%
PCB-167				--				0.00001	0.0	0.0	0.0%	0.0%
PCB-156				--				0.0005	0.0	0.0	0.0%	0.0%
PCB-157				--				0.0005	0.0	0.0	0.0%	0.0%
PCB-169	0.0865	0.346	0.867	--	0.867	0.867	0.01	0.0	0.0	0.0	0.6%	2.0%
PCB-189				--				0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
1.1	0.2	0.3	0.3	1.3	0.4

Sample ID 874 Split

Analyte	Analytical Limits		Results		<5x in MB found	Adjusted Concentrations*		WHO TEFs Human	Calculated TEQs (ppt)		Percent of Total TEQ	
	EDL	QL	Conc	Flag		Full	Quant		Full	Quant	Full	Quant
2,3,7,8-TCDF	0.904	3.616		E		0.452		0.1	0.0	0.0	1.0%	0.0%
2,3,7,8-TCDD	0.029	0.116	0.117	--		0.117	0.117	1	0.1	0.1	2.6%	2.9%
1,2,3,7,8-PeCDF	0.0132	0.0528	4.37	--		4.37	4.37	0.05	0.2	0.2	4.9%	5.5%
2,3,4,7,8-PeCDF	0.00997	0.0399	0.986	--		0.986	0.986	0.5	0.5	0.5	11.0%	12.3%
1,2,3,7,8-PeCDD	0.431	1.724		E		0.2155		1	0.2	0.0	4.8%	0.0%
1,2,3,4,7,8-HxCDF	0.0195	0.078	7.28	--		7.28	7.28	0.1	0.7	0.7	16.3%	18.2%
1,2,3,6,7,8-HxCDF	0.0171	0.0684	3.77	--		3.77	3.77	0.1	0.4	0.4	8.4%	9.4%
2,3,4,6,7,8-HxCDF	0.0198	0.0792	1.92	--		1.92	1.92	0.1	0.2	0.2	4.3%	4.8%
1,2,3,7,8,9-HxCDF	0.023	0.092	1.7	B		1.7	0.85	0.1	0.2	0.1	3.8%	2.1%
1,2,3,4,7,8-HxCDD	0.0397	0.1588	0.437	B		0.437	0.2185	0.1	0.0	0.0	1.0%	0.5%
1,2,3,6,7,8-HxCDD	0.681	2.724		E		0.3405		0.1	0.0	0.0	0.8%	0.0%
1,2,3,7,8,9-HxCDD	0.694	2.776		E		0.347		0.1	0.0	0.0	0.8%	0.0%
1,2,3,4,6,7,8-HpCDF	0.0207	0.0828	19.8	--		19.8	19.8	0.01	0.2	0.2	4.4%	5.0%
1,2,3,4,7,8,9-HpCDF	0.0293	0.1172	7.91	--		7.91	7.91	0.01	0.1	0.1	1.8%	2.0%
1,2,3,4,6,7,8-HpCDD	0.0531	0.2124	15.2	--	<5*B	15.2	15.2	0.01	0.2	0.2	3.4%	3.8%
OCDF	0.0128	0.0512	104	--		104	104	0.0001	0.0	0.0	0.2%	0.3%
OCDD	0.028	0.112	119	--		119	119	0.0001	0.0	0.0	0.3%	0.3%
PCB-81	0.0558	0.2232	2.48	B	<5*B	2.48	1.24	0.0001	0.0	0.0	0.0%	0.0%
PCB-77	0.0571	0.2284	66.4	--	<5*B	66.4	66.4	0.0001	0.0	0.0	0.1%	0.2%
PCB-123	1.86	7.44		--		0.93		0.0001	0.0	0.0	0.0%	0.0%
PCB-118	1.65	6.6	623	CJ		623	311.5	0.0001	0.1	0.0	1.4%	0.8%
PCB-114	1.96	7.84	15.5	--		15.5	15.5	0.0005	0.0	0.0	0.2%	0.2%
PCB-105	1.97	7.88	338	--		338	338	0.0001	0.0	0.0	0.8%	0.8%
PCB-126	0.573	2.292	11.5	--	<5*B	11.5	11.5	0.1	1.2	1.2	25.8%	28.8%
PCB-167	0.481	1.924	48.3	--		48.3	48.3	0.00001	0.0	0.0	0.0%	0.0%
PCB-156	0.496	1.984	108	--		108	108	0.0005	0.1	0.1	1.2%	1.4%
PCB-157	0.522	2.088	27.3	--		27.3	27.3	0.0005	0.0	0.0	0.3%	0.3%
PCB-169	0.0853	0.3412	1.18	--	<5*B	1.18	1.18	0.01	0.0	0.0	0.3%	0.3%
PCB-189	0.526	2.104	12.2	--	<5*B	12.2	12.2	0.0001	0.0	0.0	0.0%	0.0%

* Adjusted concentrations were modified using validation flags.

The Dioxin/Furan Only Full TEQ is used in this report. --->

Dioxin/Furan Only		PCBs Only		All Analytes	
Full	Quant	Full	Quant	Full	Quant
3.1	2.7	1.3	1.3	4.5	4.0

APPENDIX B
CONGENER FINGERPRINTS

THIS APPENDIX IS NOT PROVIDED AT THIS TIME

For a copy, contact Laura Williams (USEPA, Region VIII)